

Modeling Nutrient Loads from Poultry Operations in the Toledo Bend Reservoir and Sam Rayburn Reservoir Watersheds



**Prepared in Cooperation with the
Texas State Soil and Water Conservation Board**

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Background

Water quality and quantity is a major concern in the United States. The U.S. Environmental Protection Agency (EPA) 1996 water quality inventory report indicated that 40% of the surface waters that were surveyed were not meeting their designated uses (EPA, 1998).

Sam Rayburn Reservoir and Toledo Bend Reservoir (Figure 1), created in 1965 and 1966, respectively, were designed to control floods, generate hydroelectric power, and conserve water for municipal, industrial, agricultural, and recreational uses. Both lakes are very popular for fishing and boating.

In 2000, data indicated that parts of both reservoirs were not optimal for aquatic life due to low concentrations of dissolved oxygen, likely from excess algae growth. This excess growth is attributed to an over abundance of nutrients in the lake, primarily phosphorous. Mercury in fish tissue and elevated fecal coliform bacteria are additional concerns in parts of the reservoirs.

Sources of these pollutants are many. Nonpoint sources include agricultural, residential, forestry, etc. Point sources include many permitted wastewater discharges from the towns and cities, paper mills, etc. However, this project was concerned with nonpoint agricultural sources, primarily commercial poultry operations.

Much of the Texas poultry industry is located in the contributing watersheds of these reservoirs. A combined total of approximately 262,615,000 birds are produced annually in the two watersheds along with about 273,600 metric tonnes of manure. Statewide, the economic benefit of the Texas poultry industry is estimated at about \$1.6 billion to the state's economy and employs more than 11,500 people.

The Texas State Soil and Water Conservation Board (TSSWCB) has been working through the Senate Bill 503 program since 1994, and the (EPA) §319(h) grants program since 2001 to reduce nonpoint source pollution from agricultural activities in the watersheds in this project. Technical and financial assistance was provided through the local Soil and Water Conservation Districts (SWCDs) for voluntary development and implementation of water quality management plans. A total of 674 water quality management plans (WQMP) on 35,591 ha (87,947 ac) had been developed at the time the data was gathered for this study in January, 2007.

Mathematical models are one of the best tools for analyzing water quality issues. Models can replicate the flow of pollutants throughout the watersheds and can be utilized to evaluate the consequences of management practices, control measures, and planning decisions. Using a modeling approach for evaluating best management practices (BMPs) is cost-effective and timesaving, compared to field monitoring.

The goal of this project was to use computer models and geographic information systems (GIS) to simulate the effects of applying best management practices on nutrient and sediment loadings in these two Texas watersheds. The Soil and Water Assessment Tool (SWAT) was used to quantify the effects of applying BMPs on nutrient and sediment loadings to streams, rivers, and lakes in each watershed. The Natural Resources

Conservation Service (NRCS) Water Resources Assessment Team (WRAT) located at the Blackland/Grassland Research and Extension Center conducted the model simulations.

Two scenarios were modeled: (I.) baseline conditions before water quality management plan (WQMP) implementation; and (II.) WQMP conservation practices applied. Changes in sediment and nutrient loadings between the pre-BMP and the post-BMP scenarios provide the percentage of reduction in the watershed. Results were presented at three levels: farm, subbasin, and watershed level.

Methods

SWAT Model Description

The SWAT model (Arnold et al., 1998; Neitsch et al., 2002; <http://www.brc.tamus.edu/swat>) was selected for this study. SWAT is the continuation of a long-term effort of nonpoint source pollution modeling by the United States Department of Agriculture-Agricultural Research Service (USDA-ARS). SWAT incorporates features from several ARS models including SWRRB (Simulator for Water Resources in Rural Basins) (Williams et al., 1985; Arnold et al., 1990), CREAMS (Chemicals, Runoff, and Erosion from Agricultural Management Systems) (Knisel, 1980), GLEAMS (Groundwater Loading Effects on Agricultural Management Systems) (Leonard et al., 1987), and EPIC (Erosion-Productivity Impact Calculator) (Williams et al., 1984).

SWAT has the ability to simulate the impact of land management practices, sediment and agricultural chemical yields in large complex watersheds with varying soils, land use and management conditions over a long time period. The model is: (a) physically based; (b) uses readily available inputs; (c) computationally efficient to operate on large basins in a reasonable time; (d) operates on a daily time step; and (e) capable of simulating long periods for computing the effects of management changes. In addition, SWAT allows a watershed to be divided into hundreds or thousands of grid cells or sub-watersheds. The SWAT2005 version was used for this study.

Geographic Information Systems (GIS)

In recent years, considerable effort has been devoted to utilizing Geographic Information Systems (GIS) to extract inputs (e.g., soils, land use, topography) for comprehensive simulation models and spatially display model outputs. Early efforts interfaced SWAT with the Unix-based GRASS GIS (Geographic Resources Analysis Support System) (U.S. Army, 1988) (Srinivasan and Arnold, 1994). For this study, the newer ArcView GIS interface of the SWAT2005 version (Di Luzio et al., 2004) was used to develop SWAT input files.

GIS Data

Development of input databases and GIS layers were assembled at a relatively high resolution for accurate definition of the physical characteristics of the watershed. Recently available GIS maps with 30-meter resolution for soils, landuse and topography were used.

Land Use/Land Cover

Land use and cover (Table 1) affect, among other processes, surface erosion, water runoff, and evapotranspiration (ET) in a watershed. This study used the 2001 National Land Cover Dataset (NLCD) 30-meter resolution maps developed by the Multi Resource Land Characteristics Consortium (MRLC). Developed from Landsat Thematic Mapper (TM) satellite data archives and a host of ancillary sources, these are the most recent and detailed land use maps currently available.

Using detailed §319(h) project data, the NLCD landuse map was modified to include §319(h) BMP applications down to the field level. These areas were assigned unique landuse identifications to facilitate the modeling of the different BMP conservation practices applied to each farm.

Soils

The soils database describes the surface and upper subsurface of a watershed and is used to determine a water budget for the soil profile, daily runoff, and erosion. SWAT uses information about each soil horizon (e.g., thickness, depth, texture, water holding capacity, etc.).

The soils database used for this project was the Soil Survey Geographic (SSURGO), the most detailed soil database available. This 1:24,000-scale soils database is available as printed county soil surveys for most Texas counties. In recent years, the digital version has become available for GIS systems. In the SSURGO database, each soil delineation (mapping unit) is described as a single soil series. SWAT used the soils series name as the data link between the soils GIS layer and the soils properties database. SSURGO data was not available for San Augustine and Sabine counties, Texas, and Caddo and Sabine Parishes in Louisiana. The State Soil Geographic (STATSGO) data was substituted for those areas. The soil maps for STATSGO are compiled by generalizing more detailed soil survey maps.

Topography

The United States Geological Survey (USGS) database known as the Digital Elevation Model (DEM) describes the surface of a watershed as a topographical database. The DEM available for the project was a 1:24,000 scale map with a resolution of 30 meters.

Climate

Daily precipitation totals were obtained for National Weather Service (NWS) stations within and adjacent to the watersheds for 1950 through 2005. Data from nearby stations were substituted for missing precipitation data in each station record. Daily maximum and minimum temperatures were obtained for the same NWS stations. A weather generator was used to generate missing temperature data and all solar radiation for each climate station.

Model Inputs

Required inputs for each subbasin (e.g. soils, landuse/cover, topography, and climate) were extracted and formatted using the AVSWATX 2005 input interface. Specific values used in each watershed are discussed in the individual chapters.

Hydrologic Response Units (HRU)

The input interface divided each subbasin into HRU's, consisting of a single soil and landuse. The number of HRU's within a subbasin was determined by: (1) Creating an HRU for each land use that equaled or exceeded 7 percent of the area of a subbasin; and (2) creating an HRU for each soil type that equaled or exceeded 8 percent of any of the land uses selected in (1). All unique landuses developed for SB503 and §319(h) BMPs were retained regardless of land use/soil percentages. The total number of HRU's for each watershed was dependent on the number of subbasins and the variability of the land use and soils within the watershed.

Surface Runoff

Surface runoff was predicted using the SCS curve number equation (USDA-Soil Conservation Service, 1972). Higher curve numbers represent greater runoff potential.

Model Calibration

During this study, SWAT was calibrated for flow, sediment, and nutrients,

The flow calibration period was based on the available period of record for stream gage flow and reservoir volumes within each watershed. Measured stream flow was obtained from USGS. Measured daily reservoir outflow was obtained from U.S. Army Corp of Engineers (COE) databases. A base flow filter (Arnold et al., 1995) was used to determine the fraction of base flow and surface runoff at selected gaging stations.

Reservoir volumetric survey data was obtained from the Texas Water Development Board (TWDB). This data was used for calibrating the model for sediment.

Appropriate plant growth parameters for crops, forages, and woody plants were input for each model simulation. Adjustments were made to runoff curve number, soil evaporation compensation factor, shallow aquifer storage, shallow aquifer re-evaporation, and transmission loss until the simulated total flow and fraction of base flow were approximately equal to the measured total flow and base flow, respectively.

Results

Comparisons of some basic watershed characteristics are presented in this chapter in Tables 1 and 2. Detailed results of flow, sediment, and nutrient calibrations are presented in subsequent chapters of this report.

Model Calibration

Input variables were adjusted as needed to calibrate first for flow, then sediment, and finally, nutrients. Stream gage flow records were divided into separate calibration and validation periods. To measure the accuracy of the SWAT predictions to observed values, the Nash-Sutcliffe coefficient of efficiency (E_{NS}) and root mean square error (RMSE)

were used. Acceptable ranges for these accuracy measures were defined in a Quality Assurance Project Plan (QAPP).

Water quality grab sample data was available only for the Sam Rayburn watershed. The nutrient input settings developed for this watershed were also applied to the Toledo Bend watershed.

Sediment grab sample data was not available for sediment calibration for these watersheds. Consequently, sediment calibration was based on Texas Water Development Board (TWDB) reservoir hydrographic surveys.

Calibration details were presented in each individual watershed chapter.

Simulations

Results were presented as a percentage reduction in nutrient and sediment loadings at three levels:

- Farm level – This included only the areas in each subbasin where BMPs were applied.
- Subbasin level – This included both the BMP areas and the non-BMP areas within the subbasin.
- Watershed level – This included the main channel at the watershed outlet and three other selected points on the main channels.

The simulation of the watershed hydrology can be separated into two major divisions. The first part is the land phase of the hydrologic cycle that controls the amount of water, sediment, and nutrient loadings to the main channel in each subbasin. The second part is the routing phase, or water phase, of the hydrologic cycle where water, sediment, and nutrients move through the channel network of the watershed to the outlet.

The results described under the farm and subbasin levels are from the land phase, while the watershed results are from the routing phase of the simulation.

In addition, an appendix is provided for each watershed with nutrient and sediment loadings by subbasin.

Summary

Using SB 503 and §319(h) funding, the Texas State Soil and Water Conservation Board, working through local Soil and Water Conservation Districts, provided technical and financial assistance to agricultural producers in watersheds in developing and implementing water quality management plans.

This study focused on assessing the long-term benefits of the installed conservation practices using the SWAT water quality model. Two scenarios were modeled: (I.) baseline conditions before water quality management plan (WQMP) implementation; and (II.) WQMP conservation practices applied.

The results were presented as percentage reductions in nutrient and sediment loadings, at the farm level, subbasin level, and watershed level. The benefits of the BMPs were greatest at the farm level (up to 90%), and were typically 1 to 29% at the watershed level.

Watershed level benefits are tangible as the BMP application areas are small compared to the size of the watershed area.

Descriptions of Conservation Practices (BMPs)

Listed and briefly described below are the conservation practices that were planned and applied in the two east Texas Watersheds in this project. The farm owner/operator, with technical assistance from an NRCS or SWCD technician, selected the practices appropriate to his/her conservation needs. The term “best management practices” is often applied to these conservation practices. Complete standards and specifications for each conservation practice may be found in the USDA-NRCS Field Office Technical Guide located in each NRCS county field office or at the following NRCS web page: <http://www.nrcs.usda.gov/Technical/efotg/>.

Waste Storage Facility (313) - A waste storage impoundment made by constructing an embankment and/or excavating a pit or dugout, or by fabricating a structure. To temporarily store wastes such as manure, wastewater, and contaminated runoff as a storage function component of an agricultural waste management system.

Brush Management (314) – The removal, reduction or manipulation of non-herbaceous plants. This practice may be applied as part of a conservation management system to restore desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality and enhance stream flow.

Animal Mortality Facility (316) - An on-farm facility for the treatment or disposal of livestock and poultry carcasses.

Composting Facility (317) - A facility to process raw manure or other raw organic by-products into biologically stable organic material.

Conservation Cover (327) - Establishing and maintaining permanent vegetative cover to protect soil and water resources. The benefits include reduction of soil erosion and sedimentation, improved water quality, and enhanced wildlife habitat.

Conservation Crop Rotation (328) – Growing crops in a recurring sequence on the same field. This practice may be applied as part of a conservation management system to reduce sheet and rill erosion, maintain or improve soil organic matter content, and improve water use efficiency.

Residue Management, Conservation Tillage (329) - Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting soil-disturbing activities to only those necessary to place nutrients, condition residue and plant crops. Benefits include reduction of sheet and rill erosion, improved soil organic matter content, and increased plant-available moisture.

Critical Area Planting (342) - Establishing permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices. The benefits include stabilization of areas with existing or expected high rates of soil

erosion by water, and restoration of degraded sites that cannot be stabilized through normal methods.

Diversion (362) - A channel constructed across the slope generally with a supporting ridge on the lower side.

Farm Pond (378) - A water impoundment made by constructing an embankment or by excavating a pit or dugout. The benefits include water for livestock, fish and wildlife, recreation, fire control, and other related uses, and to maintain or improve water quality.

Fence (382) - A constructed barrier to livestock. This practice is applied to facilitate the application of conservation practices by providing a means to control movement of animals. Better grazing distribution is one of the most important benefits.

Field Border (386) - A strip of permanent vegetation established at the edge or around the perimeter of a field. Benefits include reduction of erosion from wind and water, soil and water quality protection, and improved wildlife food and cover.

Riparian Forest Buffer (391) - An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.

Filter Strip (393) - A strip or area of herbaceous vegetation situated between cropland, grazing land, or disturbed land (including forestland) and environmentally sensitive areas. Benefits include reduction of sediment, particulate organics, and sediment adsorbed contaminant loadings in runoff and reduction of dissolved contaminant loadings in runoff.

Firebreak (394) - A permanent or temporary strip of bare or vegetated land planned to retard fire.

Aquaculture Ponds (397) - A water impoundment constructed and managed for commercial aquaculture production.

Fish Raceway (398) - A channel or tank with a continuous flow of water constructed or used for high-density fish production.

Land Clearing (460) - Removing trees, stumps, and other vegetation to achieve a conservation objective.

Use Exclusion (472) - The temporary or permanent exclusion of animals, people or vehicles from an area.

Tree/Shrub Site Preparation (490) - Treatment of areas to improve site conditions for establishing trees and/or shrubs.

Forage Harvest Management (511) The timely cutting and removal of forages from the field as hay, green-chop or ensilage. The purpose is to optimize the yield and quality of forage at the desired quality and quantity levels, and to promote vigorous plant re-growth.

Pipeline (516) - Pipeline having an inside diameter of 8 inches or less. The purpose is to convey water from a source of supply to points of use for livestock, wildlife, or recreation.

Pond Lining (521A) - A manufactured hydraulic barrier consisting of a functionally continuous layer of synthetic or partially synthetic, flexible material.

Heavy Use Area Protection (561) - The stabilization of areas frequently and intensively used by people, animals or vehicles by establishing vegetative cover, by surfacing with suitable materials, and/or by installing needed structures. The benefits of this practice are reduced soil erosion and improved water quantity and quality.

Recreation Area Improvement (562) - Establishing grasses, legumes, vines, shrubs, trees, or other plants or selectively reducing stand density and trimming woody plants to improve an area for recreation.

Spring Development (574) - Collection of water from springs or seeps to provide water for a conservation need.

Pasture and Hayland Planting (512) - Establishing native or introduced forage species. Benefits include establishment of adapted and compatible species, varieties, or cultivars for forage production, balance of forage supply and demand during periods of low forage production, and reduction of soil erosion and improved water quality.

Prescribed Grazing (528A) - Managing the controlled harvest of vegetation with grazing animals. The practice benefits include: improvement or maintenance of the health and vigor of plant communities; improvement or maintenance of quantity and quality of forage for livestock health and productivity; and reduced accelerated soil erosion, and maintained or improved soil condition.

Nutrient Management (590) - Managing the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. The purpose is to budget and supply nutrients for plant production, proper use of manure or organic by-products as a plant nutrient source, and to minimize agricultural nonpoint source pollution of surface and ground water resources.

Pest Management (595) - Utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies, to manage weeds, insects, diseases, animals and other organisms (including invasive and non-invasive species), that directly or indirectly cause damage or annoyance. This practice is applied as part of a Resource Management System (RMS) to support one or more of the following purposes: enhance quantity and quality of commodities, and minimize negative impacts of pest control on soil resources, water resources, air resources, plant resources, animal resources and/or humans.

Tree/Shrub Establishment (612) - Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.

Upland Wildlife Habitat Management (645) - Provide and manage upland habitats and connectivity within the landscape for wildlife.

Watering Facility (614) - A permanent or portable device to provide an adequate amount and quality of drinking water for livestock and or wildlife. The purpose of this practice is to provide access to drinking water for livestock and/or wildlife in order to meet daily water requirements, and improve animal distribution.

Waste Utilization (633) - Using agricultural wastes such as manure and wastewater or other organic residues.

Manure Transfer (634) - A manure conveyance system using structures, conduits, or equipment.

Water Well (642) - A hole drilled, dug, driven, bored, jetted or otherwise constructed to an aquifer. The well provides water for livestock, wildlife, irrigation, human, and other uses. It facilitates the proper use of vegetation on rangeland, pastures and wildlife areas.

Wetland Wildlife Habitat Management (644) - Retaining, developing or managing wetland habitat for wetland wildlife.

Wildlife Watering Facility (648) – see **Watering Facility (614) above**.

Waste Utilization (633) - Using agricultural wastes such as manure and wastewater or other organic residues.

Wetland Restoration (657) - The rehabilitation of a degraded wetland or the reestablishment of a wetland so that soils, hydrology, vegetative community, and habitat are a close approximation of the original natural condition that existed prior to modification to the extent practicable.

Forest Stand Improvement (666) - The manipulation of species composition, stand structure and stocking by cutting or killing selected trees and understory vegetation.

Freezer Units - Special weather-proof freezer units for storing dead birds. The freezer unit never leaves the farm, rather the bird container is either hauled away or emptied at the farm in order to transport the contents to a rendering facility.

Incinerator - Dead animal disposal by incineration. These are governed by TNRCC regulations that control particulate emissions and air quality. Incinerators for use on poultry farms must meet commission specifications. Though exempt from TNRCC permits, incinerators must be registered by completing Form PI-7.

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Table 1. – Land use and percent cover in each watershed.*

Land Cover	Sam Rayburn <i>Total Area</i>		Toledo Bend <i>Total Area</i>	
	Hectares	Cover (%)	Hectares	Cover (%)
Cropland	3,142	0.35%	969	0.10%
Urban	61,042	6.83%	45,290	4.84%
Pasture	190,996	21.36%	151,695	16.22%
Brushy Rangeland	75,524	8.45%	87,766	9.38%
Open Rangeland	1,421	0.16%	1,119	0.12%
Water	41,531	4.64%	63,401	6.78%
Forest Evergreen	229,174	25.63%	277,947	29.71%
Forest Deciduous	53,622	6.00%	33,117	3.54%
Forest Mixed	85,869	9.60%	99,041	10.59%
Wetland Forested	141,962	15.88%	164,225	17.56%
Wetland Mixed	9,897	1.11%	10,888	1.16%
Total	894,180	100.00%	935,459	100.00%

*The Toledo Bend Reservoir watershed was modeled from stream gage 08022040 on the Sabine river to the dam on Toledo Bend reservoir. The entire Sam Rayburn watershed was modeled.

Table 2. – WQMP characteristics by watershed.**

	Sam Rayburn	Toledo Bend	Total
Subbasins (no.)	111	107	-
WQMPs (no.)	339	335	674
WQMP (ha)	17,297	18,294	35,591
Annual Birds Produced (no.)	136,146,661	126,468,615	262,615,276
Annual Manure Produced (tonnes)	142,456	131,141	273,597
Percent in WQMPs (all landuses)¹	1.9%	2.0%	-
Percent in WQMPs (Past./Hayland)²	6.0%	9.7%	-

¹. This is the percent of the entire modeled watershed in WQMPs. All land uses are considered.

². This the percent of the pasture/hayland in the modeled watershed in WQMPs.

**Additional detailed production data is available in the individual watershed reports.

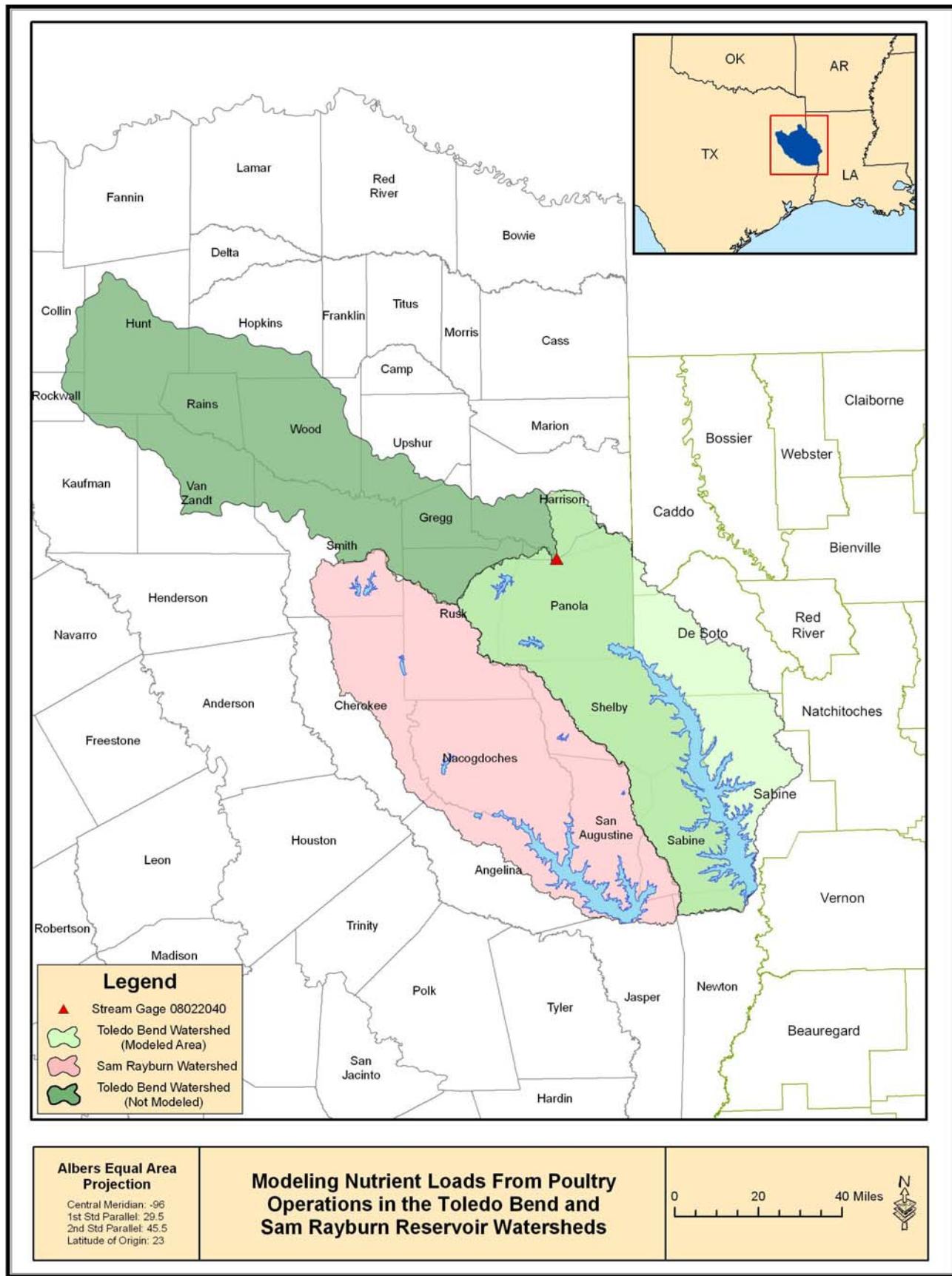


Figure 1. – Watersheds included in the study area. The Toledo Bend Reservoir Watershed was modeled from stream gage 08022040 to the dam. The entire Sam Rayburn Watershed was modeled.

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EXECUTIVE SUMMARY

The purpose of this study was to simulate nutrient and sediment loadings in the Sam Rayburn Reservoir Watershed using the Soil and Water Assessment Tool (SWAT) hydrologic/water quality model. Two scenarios were modeled: (I.) current conditions scenario representing the conditions in the watershed prior to the implementation of the WQMPs; (II.) treated conditions scenario representing the conditions after the implementation of 339 WQMPs on 17,297 ha (42,741 ac). Part one of this report discusses model calibration and validation. Part two discusses the evaluation of the conservation practices with the model.

SWAT was calibrated/validated to measured stream flow at six USGS stream gages, and calibrated to measured sediment (TWDB hydrographic survey) in Lake Nacogdoches. Stream monitoring data was used from nine sampling stations to calibrate SWAT for phosphorous and nitrogen loading. Time series plots and statistical measures were used to verify model predictions.

The validated model was applied to evaluate the effects of various best management practices on three levels: farm level; subbasin level; and watershed level. The analysis was performed for the time period 1976 through 2005. The major BMPs simulated were: waste utilization, nutrient and pest management, ponds, buffer practices (field borders, filter strips, riparian forest buffers), pasture and hayland planting, prescribed grazing, forage harvest management, heavy use area protection, waste storage facility, brush management, critical area planting, fencing, forest site preparation, firebreaks, tree establishment, and upland wildlife habitat management.

Scenario II showed that BMPs at the farm level where they were implemented reduced phosphorous loadings from 34 to 91 percent. Nitrogen loadings were reduced from 16 to 87 percent and sediment loadings from 42 to 78 percent.

Scenario II showed that BMPs at the subbasin level reduced phosphorous loadings from 0 to 33 percent. Nitrogen loadings were reduced 0 to 21 percent while sediment was reduced from 0 to 29 percent.

Scenario II showed that BMPs at the watershed level at the outlet of the Sam Rayburn Reservoir watershed (subbasin 111), reduced phosphorous, nitrogen, and sediment loadings by 6.6, 0.3, and 0.2 percent, respectively.

All simulations assume that the effectiveness of BMPs remains constant for the entire modeling period, and do not account for loss of capacity in BMPs due to sediment accumulation.

Given these results, the SB 503 and the §319(h) projects have been effective in reducing nonpoint source pollution at all levels, but the greatest benefit is at the farm level. Considering that less than 2 percent of the watershed was given conservation treatment through these programs, there exist good potential for further nutrient and sediment reductions through continued WQMP planning and application.

MODELING NUTRIENT LOADS FROM POULTRY OPERATIONS IN THE TOLEDO BEND RESERVOIR AND SAM RAYBURN RESERVOIR WATERSHEDS

Sam Rayburn Reservoir Watershed Hydrologic Simulation

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Watershed Data

Physical Data

The Sam Rayburn Reservoir Watershed is located in east Texas (Figure 1). It is located in Nacogdoches County and parts of Angelina, Cherokee, Jasper, Newton, Rusk, Sabine, San Augustine, Shelby, and Smith Counties.

The reservoir controls runoff from 894,180 hectares (3,452.5 square miles). Deliberate impoundment began on March 29, 1965. A search of USGS records indicates storage extremes: maximum contents, 528,300 hectare-meters (4,283,000 ac-ft), March 9, 1992, minimum observed, 195,507 hectare-meters (1,585,000 ac-ft). August 10, 1996.

The climate is subtropical humid, characterized by hot, humid summers and chilly to mild winters. Annual precipitation averages about 1,219 mm (48 inches). Winter rainfall is associated with large storms that the westerlies steer from west to east. Most summer rainfall occurs during thunderstorms and an occasional tropical storm or hurricane.

The watershed is within Major Land Resource Area (MLRA) 133B – The Western Coastal Plain. The MRLA is further subdivided into Common Resource Areas (CRAs) (Figure 2). Three CRAs are found in the watershed. The Tertiary Uplands (35A), gently to moderately sloping, cover the upper two thirds of the watershed. Tertiary deposits are mostly Eocene sediments typically with sandy or loamy surface textures. Natural vegetation is mostly oak-pine, with many areas replanted to loblolly pine for timber production, or in improved pasture. The Southern Tertiary Uplands (35E), located in the lower part of the watershed, cover the remainder of longleaf pine range on Tertiary sediments. Like 35A, this region is hilly and well drained, but differs in having more pine forest than the oak-pine and pasture land cover found to the north. A smaller area of CRA 35B, Floodplains and Low Terraces, is found along the Angelina river bottom above Sam Rayburn Reservoir. This is a southern bottomland hardwood community on Holocene alluvial floodplains.

Water quality is an important concern in the United States. Sam Rayburn Basin water quality parameters of concern are listed in the 2006 Texas Commission on Environmental Quality (TCEQ) Water Quality Inventory and 303(d) List. Concerns are bacteria, lead in water, zinc in water, low pH, mercury in fish tissue, and depressed oxygen levels.

Partners in this project include the Texas State Soil and Water Conservation Board, Cherokee County SWCD, Nacogdoches SWCD, Piney Woods SWCD, Rusk SWCD, Shelby SWCD, Smith County SWCD, Upper Neches SWCD, USDA-NRCS, and USDA-NRCS Water Resources Assessment Team, and Grassland/Blackland Research Center, Temple, TX.

Water Quality Management Plan Overview

Water Quality Management Plans (WQMPs) are site-specific conservation plans developed through and approved by the local soil and water conservation districts (SWCDs). They are designed to assist landowners in protecting the environment while remaining in compliance with water quality laws. The plan covers the entire operating unit and includes the conservation practices appropriate for the farm's resources while meeting the farmer's goals. Conservation practices are often referred to as best management practices (BMPs). The terms are synonymous.

The Texas Senate Bill 503, passed in 1993, directed the Texas State Soil and Water Conservation Board (TSSWCB) to implement water quality management plans in Texas. The planning process began with the first certified WQMPs completed in 1994. Then, with the passage of the 2001 SB 1339, all poultry operations were required to obtain a TSSWCB-certified WQMP. Funding through the Environmental Protection Agency (EPA) Clean Water Act §319(h) program was made available to the SWCDs to hire additional planning technicians to meet the requests for planning assistance.

Data provided from the local SWCD offices in the Sam Rayburn watershed indicates that 339 WQMPs were completed and certified. Table 1 provides an overview of these WQMPs by SWCD. Plan locations, livestock production capacity, manure and nutrient production is summarized by SWCD in the table. Most of these plans were for poultry farms; however, a few dairies, small feedlots, and woodland operations were also included.

It is important to remember that the conservation planning process is dynamic. Annual updates are needed to the waste utilization and nutrient management plan components as livestock numbers change, manure applications are rotated, manure is shipped off-site, and changes are made to the cropping systems. The WQMP data gathered for this project is the result of 13 years of conservation planning, practice application, and plan revision.

This project included only the SB503 and §319(h) funded WQMPs. Conservation plans and practices developed under other programs, such as the Environmental Quality Incentive Program (EQIP) were not included.

Project Objectives

The main objectives of this study were to:

- Collect GIS, land use, management, and measured data for the Sam Rayburn Reservoir watershed.
- Calibrate the watershed model to measured flow, sediment, and nutrients.
- Simulate nutrient loads for two scenarios: (I) Baseline - existing condition, (II) SB503 and §319(h) BMP applications.

This report is organized into two parts. Part 1 describes the calibration of the SWAT model for flow, sediment, and nutrients. Part 2 describes the application of the model to evaluate the impact of best management practices (BMPs) on water quality at various locations in the watershed.

PART 1 CALIBRATION

INTRODUCTION

The purpose of this part of the report is to describe the calibration of the SWAT model for flow, sediment, and nutrient loading. The SWAT model contains many input parameters that describe the physical, chemical, and biological processes. During the calibration phase, the model is run and the results are compared to observed data. The values of the input parameters are refined within the range of acceptability until the model reproduces the observed data.

METHODOLOGY

Model Inputs

Land Use / Cover

The land use/land cover map was derived from the USGS National Land Cover Dataset (NLCD). The land use map for the watershed is shown in Figure 3. The area and percentages of each land use is indicated in Table 2.

Soils

The Soil Survey Geographic (SSURGO) databases were available for Cherokee, Jasper, Newton, Nacogdoches, Rusk, Shelby, Smith, and Angelina counties. SSURGO is the most detailed level of soil mapping done by the NRCS. The less detailed State Soil Geographic (STATSGO) soil data was used for San Augustine and Sabine counties. These soil databases were downloaded and merged together to create the soils database for the Sam Rayburn watershed (Figure 4).

The dominant soil series in the Sam Rayburn watershed were Sacul (16.9%), Cuthbert (12.8%), Mantachie (5.5%), Lilbert (5.0%), Nacogdoches (4.9%), Bowie (4.4%), Darco (4.2%), Redsprings (3.4%), Kirvin (3.4%), Tenaha (2.6%), Laneville (2.6%), Woodtell

(2.2%), Bernaldo (2.1%), Trawick (1.9%), Marietta (1.8%), Kullit (1.7%), Mollville (1.5%), Tuscosso (1.2%), and Maben (1.2%). These nineteen soils, with water (5.2%) represent 84.2 percent of the watershed area. A short description of each follows:

Sacul. - The Sacul series consists of very deep, moderately well drained, slowly permeable soils that formed in acid, loamy and clayey marine sediments. These soils are on uplands of the Western and Southern Coastal Plains; MLRAs 133A and 133B. Near the type location, the average annual air temperature is about 63 degrees F and the average annual precipitation is about 50 inches. Slopes are dominantly 2 to 25 percent but range from 1 to 40 percent.

Cuthbert. - The Cuthbert series consists of soils that are moderately deep to weakly consolidated sandstone and shale. They are well drained and slowly to moderately slowly permeable. These soils are on strongly sloping to steep uplands. Slopes are dominantly 8 to 25 percent but range from 5 to 40 percent.

Mantachie. - The Mantachie series consists of somewhat poorly drained, moderately permeable soils. They formed in loamy alluvium. These soils are on flood plains. They usually flood late in winter and early in spring. The seasonally high water table is at a depth of 1.0 to 1.5 feet. Slope is dominantly less than 1 percent but ranges to 3 percent.

Lilbert. - The Lilbert series consists of very deep, well drained, moderately slowly permeable soils. These soils formed in sandy and loamy deposits on uplands. Water runs off the surface at a negligible to low rate. Slopes range from 1 to 8 percent.

Nacogdoches. - The Nacogdoches series consists of deep, well drained, moderately slowly permeable soils that formed in thick marine sediments high in glauconite. These soils are on gently to strongly sloping uplands. Slope is dominantly less than 8 percent but ranges up to 15 percent.

Bowie. - The Bowie series consists of very deep, well drained, moderately slowly permeable soils that formed in loamy Coastal Plain deposits. These soils are on broad very gently sloping to moderately sloping uplands. Slopes range from 1 to 8 percent.

Darco. - The Darco series consists of very deep, somewhat excessively drained, moderately permeable soils that formed in sandy and loamy deposits on uplands. It is gently sloping to steep and slopes range from 1 to 25 percent.

Redsprings. - The Redsprings series consists of soils that are deep to mixed marine sediments mainly glauconitic. They are well drained and slowly to moderately slowly permeable. These soils are on gently sloping to steep uplands. Slopes are mainly 2 to 15 percent, but range from 2 to 40 percent.

Kirvin. - The Kirvin series consists of soils that are deep to stratified sandstone and shale. They are well drained and moderately slowly permeable. These soils are on gently sloping to moderately steep convex uplands. Slope is dominantly 2 to 8 percent but ranges from 1 to 15 percent.

Tenaha. - The Tenaha series consists of sandy, well drained, moderately slowly to moderately permeable soils that are deep to weathered stratified sandstone and shale. These soils are on gently sloping to moderately steep uplands. Slopes range from 1 to 20 percent.

Laneville. - The Laneville series consist of very deep, moderately well drained, slowly permeable, loamy soils on flood plains. These soils formed in loamy and clayey alluvium. Slopes range from 0 to 1 percent.

Woodtell. - The Woodtell series consists of soils that are deep to stratified shale and loamy materials. They are well drained and very slowly permeable. These soils are gently sloping to moderately steep. The slope ranges from 1 to 20 percent.

Bernaldo. - The Bernaldo series consists of very deep, well drained, moderately permeable soils that formed in loamy alluvial deposits. The soils are on nearly level to moderately sloping stream terraces. Slopes are dominantly less than 5 percent but range from 0 to 8 percent.

Trawick. - The Trawick series are moderately deep, well-drained, moderately slowly permeable soils. They formed in glauconitic materials. These soils are on gently sloping to steep uplands. Slopes range from 2 to 45 percent.

Marietta. - The Marietta series consists of deep, moderately well drained soils on wide floodplains. Permeability is moderate. These are nearly level soils that formed in loamy alluvium along streams that drain areas of the Blackland Prairie and Southern Coastal Plain Major Land Resource Areas. Slopes range from 0 to 2 percent.

Kullit. - The Kullit series consists of deep, moderately well drained, moderately slowly permeable soils that formed in loamy and clayey sediments of Cretaceous or Quaternary age. These soils are on nearly level to gently sloping ridge crest of uplands in the Western Coastal Plains. Slopes range from 0 to 5 percent. Mean annual precipitation is 45 inches. Mean annual temperature is 63 degrees F.

Mollville. - The Mollville series consists of very deep, poorly drained, slowly permeable soils that formed in thick, stratified sandy and loamy sediments. These soils are in nearly level or depressional positions on stream terraces. Slopes are 0 to 1 percent.

Tuscosso. - The Tuscosso series consists of deep, moderately well drained, moderately slowly permeable soils that formed in recent clayey alluvial deposits. These soils are on nearly level bottomlands that drain areas of reddish soils such as the Nacogdoches and Trawick series. These soils flood almost every year for a duration of usually less than 2 days. The slope is less than 1 percent.

Maben. - The Maben series consists of well-drained soils that formed in thinly stratified sandy to clayey sediments and soft shale or laminar clays. Permeability is moderately slow. These gently sloping to very steep soils are on uplands of the Southern and Western Coastal Plain Major Land Resource Areas. Slopes range from 2 to 60 percent.

Topography

Elevations range from about 50 meters (164 ft) on the flood plain above Sam Rayburn Reservoir to about 232 meters (761 ft) above mean sea level at the top of the watershed in Smith County (Figure 5).

Subbasins in the Sam Rayburn watershed (Figure 1) were delineated using the 30-meter (98.43 ft), 1:24,000 scale DEM. The result was 111 subbasins with an average size of 80.56 square kilometers (31.10 square miles).

Climate

Daily precipitation totals and maximum and minimum temperatures were obtained for National Weather Service stations within and adjacent to the watersheds (Figure 6) for input to SWAT. The model uses rainfall and temperature data from the climate station nearest to the centroid of each subbasin. Climate stations outside the watershed, yet close enough to influence input data to the model, were included in the GIS database. Missing precipitation data was patched from neighboring climate stations, while missing temperature data was generated with the SWAT model. Table 3 lists precipitation stations located in or near the Sam Rayburn watershed and the period of record for which data was available for each station.

Land Management

The cooperating Soil and Water Conservation District (SWCD) offices and the USDA – Natural Resources Conservation Service (NRCS) offices provided detailed production and management information for each of the 339 WQMPs in the watershed. Detailed data included farm livestock production, manure and nutrient production, waste utilization, nutrient management and other conservation practices, soil test phosphorous and forages grown.

Cropland is insignificant in this watershed, comprising only about 0.35 percent of the land area. More important is the 22 percent of land use in improved pastures and hayfields, which receive the manure applications for forage production. Typical pasture forages are warm-season perennial grasses, including common Bermuda grass, Pensacola and Argentine Bahia grass, and hybrid Bermuda grasses. The most prevalent hybrid Bermudas are Coastal, Alicia, Tifton 44, and Tifton 85. Pastures are often a mixture of common Bermuda and Bahia grass. Hay fields more often will utilize a hybrid Bermuda. Observed soil test data were used to estimate soil phosphorous content for the pasture and hayland portions of the watershed.

Spatial View of WQMP locations, poultry production, and manure production

Figures 7 through 16 provide spatial views of the plan locations down to the subbasin level. Point locations of individual farms were not included in the interest of privacy protection.

- Figure 7 – Plan locations by subbasin (all 339 plans). The WQMPs are mostly located in the central part of the basin.
- Figure 8 – Broiler plan locations by subbasin.

- Figure 9 – Breeder plan locations by subbasin.
- Figure 10 – Pullet plan locations by subbasin.
- Figure 11 – Woodland plan locations by subbasin.
- Figure 12 – Dairy and feedlot plan locations by subbasin.
- Figure 13 – Locations of plans receiving and applying manure from other farms. These farms generally have no confined animal feeding operations (CAFO). Rather, they buy manure from neighboring operations and apply it to their farms following the conservation practices in their WQMP.
- Figure 14 – Poultry production map areally weighted.
- Figure 15 – Poultry manure production areally weighted. Total poultry manure produced in the subbasin was divided by the subbasin area.
- Figure 16 – Surface map of predicted soil test phosphorous (STP) based upon the soil tests in the 339 WQMPs. This map was created from a limited number of samples and is intended for general reference only. It refers only to the pastureland and hayland land uses.

Model Calibration

Input variables were adjusted as needed to calibrate first for flow, then sediment, and finally nutrient concentrations. Significant input variables for the SWAT model are shown in Table 4. Available stream gages for flow calibration are shown in Table 5.

Subbasins were delineated using the 30-meter (98.43 ft) DEM and the ArcView interface for SWAT 2005. The subbasin threshold area was set to 5,000 hectares (12,355 ac). Site locations for reservoirs, stream gages and water quality sampling sites were used to define additional subbasin outlets, resulting in 111 subbasins.

Required inputs for each subbasin (e.g. soils, land use/land cover, topography and climate) were extracted and formatted using the AVSWAT-X for SWAT 2005 interface. The input interface divided each subbasin into virtual subbasins or hydrologic response units (HRU). A single land use and soil were selected for each HRU. The number of HRU's within a subbasin was determined by: (1) creating an HRU for each land use that equaled or exceeded 7 percent of the area of a subbasin; and (2) creating an HRU for each soil type that equaled or exceeded 8 percent of any of the land uses selected in (1). The total number of HRU's (2,876) was dependent on the number of subbasins and the variability of the land use and soils within each subbasin. The properties for each of the selected land uses and soils were automatically extracted from model-supported databases.

Flow Calibration

Six stream gages were available (Figure 17) for model stream flow calibration/validation. Table 5 lists the stream gages used for flow calibration/validation and the time period for each. Stream flow was first calibrated/validated for the gage furthest upstream. Then, sequentially moving downstream to the next gage and calibrating for that area. A base flow filter (Arnold et al., 1995) was used to determine the portioning of groundwater and surface flow.

Stream Gage 8034500 – This gage is on Mud Creek near Jacksonville, TX at the outlet of subbasin 104. The calibration period was from 1/1/1950 through 12/31/1964 (Figure 19), while the validation period was from 1/1/1965 through 12/31/1978 (Figure 20).

Stream Gage 8033900 – This gage is on the East Fork of the Angelina River near Cushing, Texas, at the outlet of subbasin 103. The calibration period was from 1/1/1964 through 12/31/1976 (Figure 21), while the validation period was from 1/1/1977 through 12/31/1988 (Figure 22).

Stream Gage 8037050 – This gage is on the Lanana Bayou at Nacogdoches, TX at the outlet of subbasin 106. The calibration period was from 1/1/1965 through 12/31/1975 (Figure 23), while the validation period was from 1/1/1976 through 12/31/1985 (Figure 24).

Stream Gage 8037000 – This gage is on the Angelina River near Lufkin, TX at the outlet of subbasin 61. The calibration period was from 1/1/1950 through 12/31/1964 (Figure 25), while the validation period was from 1/1/1965 through 12/31/1978 (Figure 26).

Stream Gage 8039100 – This gage is on Ayish Bayou near San Augustine, TX at the outlet of subbasin 106. The calibration results are found in Figure 13. The calibration period was from 1/1/1960 through 12/31/1972 (Figure 27), while the validation period was from 1/1/1973 through 12/31/1984 (Figure 28).

Stream Gage 8038000 – This gage is on the Attoyac Bayou near Chireno, TX at the outlet of subbasin 107. The calibration period was from 1/1/1956 through 12/31/1970 (Figure 29), while the validation period was from 1/1/1971 through 12/31/1984 (Figure 30).

Adjustments were made to soil evaporation compensation factor, shallow aquifer storage, shallow aquifer re-evaporation, Manning's "n" values for channel roughness and channel transmission loss until the simulated total flow and fraction of base flow were approximately equal to the measured total flow and base flow, respectively.

To measure the accuracy of the SWAT predictions to observed values, the Nash-Sutcliffe coefficient of efficiency (E_{NS}) and root mean square error (RMSE) were used. Significant input variables for the SWAT model are shown in Table 4.

Sediment Calibration

The Texas Water Development Board (TWDB) Hydrographic Survey Unit completed a hydrographic survey of Lake Nacogdoches in 1994. The purpose of the survey was to determine the capacity of the lake at the normal pool elevation and to establish baseline

information for future surveys. Results from this 1994 survey were compared to the original volumetric estimates when the dam and reservoir were built in 1976.

Unlike older survey technology that made use of cables for positioning, Global Positioning System (GPS) technology was used to locate the horizontal position, and depth sounders to collect vertical measurements. Data collection is by an on-board computer, which later was used to calculate the lake volume.

According to the TWDB 1994 Volumetric Survey Report of Lake Nacogdoches, the storage capacity was reduced by 344.76 Ha-m (2,795 ac-ft) between 1976 (beginning of impoundment) and 1994. Assuming the reduction in storage is due to sediment and that the unit weight of submerged sediment is 55 lb/ft³ (881 kg/m³), the amount of sediment deposited in the lake during this period was 2,840,112 metric tons (3,130,688 tons).

The period July 1976 through March 1994 was used to calibrate SWAT for sediment loadings to Lake Nacogdoches. For these conditions, it was assumed that the USLE conservation practice factor ("P") was 1.0 on all cropland. In order to adjust sediment prediction, several factors were adjusted:

Channel Erodibility Factor – Range is 0.0 to 1.0. A value of 0.0 indicates a non-erosive channel. A value of 1.0 indicates no resistance to erosion.

Channel Cover Factor – Range is 0.0 to 1.0. A value of 0.0 indicates that the channel is completely protected from degradation by cover, and a value of 1.0 indicates there is no vegetative cover on the channel.

Residue Decomposition Coefficient – Range is 0.01 to 0.09. The fraction of residue which will decompose in a day, assuming optimal moisture, temperature, C:N ratio and C:P ratio.

Sediment Concentration Factor (SPCON) – Range is 0.0001 to 0.01. Linear parameter for calculating the maximum amount of sediment that can be re-entrained during channel sediment routing.

Sediment Exponent Parameter (SPEXP) – Range is 1.0 to 1.5. Exponential factor for calculating sediment re-entrained in channel sediment routing.

Peak Rate Function (PRF) – Range is 0.5 to 2.0. This is the Peak rate adjustment for sediment routing in the channel. Sediment routing is a function of peak flow rate and mean daily flow. Because SWAT cannot directly calculate the sub-daily hydrograph, this variable was incorporated to allow adjustment for the effect of the peak flow rate on sediment routing. This variable influences channel degradation. Table 4 provides the model calibration settings for sediment.

Nutrient Calibration

Continuous records of monitoring data for nutrients (nitrogen and phosphorous) were not available for the Sam Rayburn watershed. However, limited grab sample data were available from 1998 through 2005 (usually four samples per year, with a few years missing) for nine monitoring stations (Figure 18) Note: This figure is out of sequence in write-up. Appropriate model variables were adjusted so that the mean of the predicted values was within two

standard deviations of the mean of the measured values as specified in the QAPP. Tables 6 and 7 provide the model calibration settings for nitrogen and phosphorous, respectively.

Evaluation of Model Performance

Model prediction performance was evaluated by the mean, root mean square error (RMSE), and Nash-Sutcliffe simulation efficiency (E_{NS}). The E_{NS} indicates how well the plot of observed versus simulated values fits the 1:1 line. If the E_{NS} value is less than or close to zero, the model prediction is considered unacceptable or poor. If the E_{NS} value is one, then the model is perfect. Generally, an E_{NS} of 0.6 or higher is considered good.

RMSE is the calculated difference between measured and predicted values expressed as a residual of the means squared. One way to gage the accuracy of the calibration is to compare the mean measured monthly flow volume with the RMSE. The lower the RMSE compared to the measured values the more precise the comparison.

Results and Discussion

Flow Calibration/Validation:

Stream Gage 8034500 Calibration – Flow calibration results are shown in Figure 19. The RMSE (3.92) and E_{NS} (0.82) values indicate that predicted total monthly flow compares reasonably well with total monthly measured flow. The base flow filter (Arnold et al., 1995) estimated from stream flow records that the groundwater contribution to stream flow was 40 percent. The SWAT predicted base flow was 37 percent.

Stream Gage 8034500 Validation – Flow validation results are shown in Figure 20. Again, the RMSE (13.57) and E_{NS} (0.82) values indicate that predicted total flow compares reasonably well with the measured flow. Estimated base flow was 40 percent. The SWAT predicted base flow was 37 percent.

Stream Gage 8033900 Calibration – Flow calibration results are shown in Figure 21. The RMSE (2.10) and E_{NS} (0.81) values indicate that predicted total flow compares quite well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8033900 Validation – Flow validation results are shown in Figure 22. The RMSE (4.32) and E_{NS} (0.72) values indicate that predicted total flow compares reasonably well with the measured flow. Estimated base flow was 40 percent. The SWAT predicted base flow was 38 percent.

Stream Gage 8037050 Calibration – Flow calibration results are shown in Figure 23. The low RMSE (0.58) and high E_{NS} (0.78) values indicate that predicted total flow again compares well with measured flow. The estimated base flow was 39 percent. The SWAT predicted base flow was 37 percent.

Stream Gage 8037050 Validation – Flow validation results are shown in Figure 24. Again, low RMSE (0.80) and an E_{NS} (0.64) values indicate that predicted total flow compares well

with the measured flow. Estimated base flow was again 39 percent. The SWAT predicted base flow was 37 percent.

Stream Gage 8037000 Calibration – Flow calibration results are shown in Figure 25. The low RMSE (20.76) and an E_{NS} (0.71) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 37 percent, respectively.

Stream Gage 8037000 Validation – Flow validation results are shown in Figure 26. The low RMSE (18.08) and an E_{NS} (0.74) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 37 percent, respectively.

Stream Gage 8039100 Calibration – Flow calibration results are shown in Figure 27. The low RMSE (1.71) and an E_{NS} (0.64) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 40 percent, respectively.

Stream Gage 8039100 Validation – Flow validation results are shown in Figure 28. The low RMSE (2.19) and an E_{NS} (0.69) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 40 percent, respectively.

Stream Gage 8038000 Calibration – Flow calibration results are shown in Figure 29. The low RMSE (6.00) and an E_{NS} (0.78) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 37 percent, respectively.

Stream Gage 8038000 Validation – Flow validation results are shown in Figure 30. The low RMSE (8.36) and an E_{NS} (0.70) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 40 percent, respectively.

The monthly time series shown reveals that SWAT under-predicts flow in some periods and over-predicts in others. This is most likely due to missing precipitation data in the station records or rainfall variability that is not reflected in the measured data. Rainfall variability is caused by localized thunderstorms occurring over climate stations or between stations, and spatial distribution of storms not accurately represented in the precipitation data input in SWAT.

Sediment Calibration: The predicted sediment load for Lake Nacogdoches for the 1976 through 1994 period was 2,669,500 metric tons, close to the measured sediment of 2,840,112 metric tons, and well within the 15 percent range designated for the project.

Phosphorous Calibration: Table 8 compares measured and predicted daily in-stream Total Phosphorous concentrations for the nine sampling stations in the Sam Rayburn watershed. Most sampling sites were represented by about 25 samples. Stream flow data was not collected at these stations.

The predicted total phosphorous concentrations fell within two standard deviations of the measured mean concentrations indicating that the model is doing a reasonably good job in simulating the movement and transport of the nutrient in the watershed. Measured concentrations were assumed accurate.

Nitrogen Calibration: Table 9 compares measured and predicted daily in-stream Total Nitrogen concentrations for the nine sampling stations. Most sampling sites were represented by about 32 samples.

The predicted total nitrogen concentrations fell within two standard deviations of the measured mean concentrations indicating that the model is again doing a reasonably good job in simulating the movement and transport of the nitrogen in the watershed. Measured nitrogen concentrations were assumed accurate.

One should keep in mind that comparing an instantaneous grab sample with the average daily concentration calculated by the SWAT model is a difficult comparison at best.

Conclusions

Part 1 of this report describes the calibration of the SWAT model for flow, sediment, and nutrients for the Sam Rayburn Reservoir watershed. Monthly simulated flow was compared to measured stream gage values. Sediment yield into Lake Nacogdoches was compared to a sediment survey of the lake. Finally, predicted in-stream nutrient concentrations were compared to measured in-stream concentrations. The results indicated that the model was calibrated properly and performing well.

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Table 1. Profile of livestock operations in the §319(h) and SB 503 WQMPs – Sam Rayburn Watershed.

Parameter	Nacogdoches SWCD 401	Smith Co. SWCD 426	Cherokee Co. SWCD 427	Pineywoods SWCD 429	Upper Neches SWCD 438	Rusk SWCD 447	Shelby SWCD 449	Grand Total
WQMPs (no.) and (ha)	188 (7,862)	2 (30)	12 (1,279)	47 (3,157)	11 (365)	32 (2,248)	47 (2,355)	339 (17,297)
Breeders* (no.)	544,394	0	18,150	156,315	0	165,784	94,769	979,412
Broilers (no.)	74,294,317	0	2,326,900	20,909,468	3,803,452	10,498,388	22,414,657	134,247,181
Pullets (no.)	742,860	0	0	129,688	0	47,520	0	920,068
Total Annual Bird Production (no.)	75,581,571	0	2,345,050	21,195,471	3,803,452	10,711,692	22,509,426	136,146,661
Breeder Manure Production (t**)	8,803	0	288	2,481	0	2,633	1,505	15,711
Broiler Manure Production (t)	66,461	0	2,111	18,968	3,563	9,668	20,500	121,272
Pullet Manure Production (t)	2,645	0	0	294	0	376	0	3,316
Feedlot Manure Production (t)	0	0	0	0	0	1,669	0	1,669
Dairy Manure Production (t)	0	142	347	0	0	0	0	489
Total Manure Production (t)	77,910	142	2,747	21,743	3,563	14,346	22,005	142,456
Nitrogen Produced, breeder (kg)	103,572	0	3,170	33,584	0	56,883	16,521	213,730
Nitrogen Produced, broiler (kg)	1,422,315	0	44,709	398,576	84,629	209,864	409,979	2,570,070
Nitrogen Produced, pullet (kg)	30,428	0	0	2,941	0	3,765	0	37,134
Nitrogen Produced, dairy (kg)	0	2,046	807	0	0	0	0	2,853
Nitrogen Produced, feedlot (kg)	0	0	0	0	0	13,539	0	13,539
Nitrogen produced total (kg)	1,556,315	2,046	48,685	435,101	84,629	284,050	426,499	2,837,326
P2O5 Produced, breeder (kg)	195,765	0	6,339	57,803	0	89,746	40,484	390,137
P2O5 Produced, broiler (kg)	2,270,548	0	72,727	641,330	145,371	329,810	696,893	4,156,680
P2O5 Produced, pullet (kg)	66,411	0	0	6,912	0	8,847	0	82,170
P2O5 Produced, dairy (kg)	0	2,608	1,522	0	0	0	0	4,130
P2O5 Produced, feedlot (kg)	0	0	0	0	0	40,232	0	40,232
P2O5 produced total (kg)	2,532,724	2,608	80,589	706,045	145,371	468,635	737,377	4,673,349
K2O Produced, breeder (kg)	118,858	0	3,602	38,231	0	67,258	21,799	249,748
K2O Produced, broiler (kg)	1,688,936	0	53,566	463,814	111,424	241,965	491,936	3,051,641
K2O Produced, pullet (kg)	36,310	0	0	3,677	0	4,706	0	44,692
K2O Produced, dairy (kg)	0	2,712	3,110	0	0	0	0	5,821
K2O Produced, feedlot (kg)	0	0	0	0	0	48,874	0	48,874
K2O produced total (kg)	1,844,103	2,712	60,278	505,722	111,424	362,803	513,736	3,400,776

(table continued on next page)

Table 1. – continued

Parameter	Nacogdoches SWCD 401	Smith Co. SWCD 426	Cherokee Co. SWCD 427	Pineywoods SWCD 429	Upper Neches SWCD 438	Rusk SWCD 447	Shelby SWCD 449	Grand Total
Breeder manure applied on farm (t)	2,927	0	129	1,376	0	216	571	5,218
Broiler manure applied on farm (t)	12,664	0	211	7,786	908	2,547	3,734	27,851
Pullet manure applied on farm (t)	534	0	0	151	0	0	0	685
Dairy manure applied on farm (t)	0	0	7,180	0	0	0	0	7,180
Feedlot manure applied on farm (t)	0	0	0	0	0	1,669	0	1,669
Total manure applied on farm (t)	16,125	142	7,868	9,313	908	4,433	4,305	43,093
Breeder manure applied off farm (t)	6,572	0	160	1,105	0	2,415	934	11,186
Broiler manure applied off farm (t)	54,762	0	1,899	12,550	2,855	7,006	16,770	95,842
Pullet manure applied off farm (t)	2,155	0	0	143	0	0	0	2,299
Dairy manure applied off farm (t)	0	0	0	0	0	0	0	0
Feedlot manure applied off farm (t)	0	0	0	0	0	0	0	0
Total manure applied off farm (t)	63,489	0	2,058	13,798	2,855	9,421	17,705	109,327

*There are three levels of poultry production: pullet growers, breeder producers, and broiler farms. Pullet growers raise the hens from chicks to about six months age, which are collected and moved to the breeder farms. There, the breeder hens produce broiler eggs. The eggs are then collected and taken to a hatchery. The hatchlings are then sent to the broiler growers, who raise the chickens for meat. Broiler producers grow about six flocks per year.

** metric tonnes (t)

Table 2. Land use/cover in Sam Rayburn Watershed.

Description	Hectares	Acres	Cover (%)
Cropland	3,142	7,765	0.35%
Urban	61,042	150,837	6.83%
Pasture	190,996	471,961	21.36%
Brushy Rangeland	75,524	186,623	8.45%
Open Rangeland	1,421	3,510	0.16%
Water	41,531	102,625	4.64%
Forest Evergreen	229,174	566,299	25.63%
Forest Deciduous	53,622	132,502	6.00%
Forest Mixed	85,869	212,186	9.60%
Wetland Forested	141,962	350,796	15.88%
Wetland Mixed	9,897	24,455	1.11%
Total	894,180	2,209,558	100.00%

Table 3. Climate stations used in Sam Rayburn Watershed simulations.

Station Number	Station Name	Data Type	Start Date	End Date
5427	Lufkin #2	Precip	1990	2006
2415	Deport 4 Nw	Temp & Precip	1948	2001
5424	Lufkin Angelina Co Ap	Temp & Precip	1948	2006
9708	Whitehouse 3 S	Precip	1992	2007
9207	Tyler	Temp & Precip	1984	2007
6335	New Summerfield 2w	Precip	1992	2007
6722	Overton	Precip	1943	1987
4081	Henderson	Temp & Precip	1908	2007
1578	Center	Temp & Precip	1922	2007
1711	Chireno	Precip	1989	2007
1089	Broaddus 1 Ne	Precip	1977	2007
7951	San Augustine	Precip	1909	2007
7040	Pineland	Precip	1965	2007
1094	Bronson	Temp & Precip	1924	1979
7936	Sam Rayburn Dam	Temp & Precip	1968	2007
4280	Horger	Precip	1944	1982
4525	Jacksonville	Temp & Precip	1953	2007
2444	Dialville 2 W	Temp & Precip	1897	2007
7547	Reklaw 3 Nne	Precip	1958	1988
7841	Rusk	Temp & Precip	1942	2007
2558	Douglass 1 S	Precip	1983	2006
6177	Nacogdoches	Temp & Precip	1948	2007
6265	Neuville	Precip	1940	2007
7700	Rockland 2 Nw	Temp & Precip	1904	1979

Table 4. SWAT Input Variables For Flow and Sediment Calibration.

Variable	Adjustment
Runoff curve number adjustment - Subbasins 1-6, 11, 12, 102, 104	-1
Subbasins 21, 22, 27, 28, 50, 51, 54, 55, 58, 59, 64-96, 103, 106, 111, 108	none
Subbasins 7-10, 13-20, 23, 24, 29-32, 42-45, 52, 53, 56, 57, 60-63, 97-100, 105, 109	+3
Subbasins 25, 26, 33-41, 46-49, 101, 107, 110	-8
Manning's "N" value for the main channel	0.06
Baseflow alpha factor for bank storage (days)	0.20
Channel erodibility factor	0.40
Channel cover factor	0.40
Channel transmission loss (mm/hour) - subbasins 25, 26, 33-41, 46-49, 101, 107, 110	5.00
Channel transmission loss (mm/hour) - all other subbasins	1.00
Minimum shallow aquifer storage for groundwater flow (mm) - subbasin 106	4.00
Subbasins 7-10, 13-20, 23, 24, 29-32, 42-45, 52, 53, 56, 57, 60-63, 97-100, 105, 109	4.50
Subbasins 21, 22, 27, 28, 103	4.75
Subbasins 1-6, 11, 12, 58, 59, 102, 104, 108	5.00
Subbasins 25, 26, 33-41, 46-49, 101, 107, 110	75.00
Minimum shallow aquifer storage for re-evaporation (mm) - subbasins 25, 26, 33-41, 46-49, 101, 107, 110	0.10
Minimum shallow aquifer storage for re-evaporation (mm) - all other subbasins	5.00
Shallow aquifer re-evaporation coefficient - forest land uses	0.20
Shallow aquifer re-evaporation coefficient - all other land uses	0.10
Ground water delay (days)	75.00
Baseflow alpha factor (days)	0.0184
Subbasin transmission loss (mm/hour) - subbasins 25, 26, 33-41, 46-49, 101, 107, 110	5.00
Subbasin transmission loss (mm/hour) - all other subbasins	1.00
Manning's "N" value for the tributary channels	0.06
Initial residue (kg/ha) - forest land uses	5000
Initial residue (kg/ha) - all other land uses	2000
Soil evaporation compensation factor	0.50
Maximum canopy storage - forest land uses (mm/hour)	50.00
Maximum canopy storage - all other land uses (mm/hour)	0.00
Residue decomposition coefficient	0.10
Re-entrainment of channel sediment - exponent	0.50
Re-entrainment of channel sediment - linear	0.001
Peak rate function	1.00
Surface lag	6.00
Reservoir seepage rate (mm/hour)	0.08
Soil available water capacity (mm H ₂ O/mm soil)	+0.05

Table 5. Stream gages used in Sam Rayburn Watershed simulations.

Station Number	Station Name	Calibration Period		Validation Period	
		Start Date	End Date	Start Date	End Date
8034500	Mud Ck nr Jacksonville, TX	1/1/1950	12/31/1964	1/1/1965	12/31/1978
8033900	E Fk Angelina Rv nr Cushing, TX	1/1/1964	12/31/1976	1/1/1977	12/31/1988
8037050	Bayou Lanana at Nacogdoches, TX	1/1/1965	12/31/1975	1/1/1976	12/31/1985
8037000	Angelina Rv nr Lufkin, TX	1/1/1950	12/31/1964	1/1/1965	12/31/1978
8039100	Ayish Bayou nr San Augustine, TX	1/1/1960	12/31/1972	1/1/1973	12/31/1984
8038000	Attoyac Bayou nr Chireno, TX	1/1/1956	12/31/1970	1/1/1971	12/31/1984

Table 6. Parameters used in nitrogen calibration.

Input Parameter	Description	Value
NPERCO	Nitrate percolation coefficient (m^3/Mg)	0.01
RS3	Benthic source rate for NH_4-N in reach at $20^\circ C$ (mg $NH_4-N/(m^2 day)$)	0.00
RS4	Rate coefficient for organic N settling in the reach at $20^\circ C$ (day^{-1})	0.20
AI1	Fraction of algal biomass that is nitrogen (mg N /mg alg)	0.06
BC3	Rate constant for hydrolysis of organic N to NH_4 in the reach at $20^\circ C$ (day^{-1})	0.21
N_UPDIS	Nitrogen uptake distribution parameter	50.00

Table 7. Parameters used in phosphorous calibration.

Input Parameter	Description	Value
PPERCO	Phosphorous percolation coefficient (m^3/Mg)	7.00
PHOSKD	Phosphorous soil partitioning coefficient (m^3/Mg)	100.00
CMN	Rate factor of humus mineralization	0.00
P_UPDIS	Phosphorous uptake distribution parameter	10.00
RS2	Benthic source rate for dissolved phosphorous in reach (mg dissolved P/ $(m^2 day)$)	0.25
RS5	Organic phosphorous settling rate at $20^\circ C$ (day^{-1})	0.00
AI2	Fraction of algal biomass that is phosphorous (mg P/mg alg)	0.03
GWSOLP	Concen. of soluble phosphorous in groundwater contribution to streamflow (mg P/L)	0.01
SOL_ORG P	Initial soluble P concentration in soil layer (mg/kg)	300.00
SOL_SOL P	Initial organic P concentration in soil layer (mg/kg)	300.00

Table 8. Measured and predicted phosphorous concentrations.

Sampling Station		Average	Median	SD	Plus 2 SD	Minus 2 SD
18302 (Sub 102)	<i>Meas</i>	0.459	0.435	0.285	1.030	-0.112
	<i>Pred</i>	0.197	0.053			
14477 (Sub 104)	<i>Meas</i>	0.436	0.190	0.067	0.569	0.303
	<i>Pred</i>	0.291	0.094			
10532 (Sub 99)	<i>Meas</i>	0.418	0.280	0.376	1.170	-0.334
	<i>Pred</i>	0.266	0.087			
10633 (Sub 100)	<i>Meas</i>	0.454	0.210	0.518	1.490	-0.582
	<i>Pred</i>	0.338	0.179			
16076 (Sub 26)	<i>Meas</i>	0.252	0.163	0.227	0.706	-0.202
	<i>Pred</i>	0.442	0.012			
10475 (Sub 98)	<i>Meas</i>	0.260	0.110	0.500	1.261	-0.741
	<i>Pred</i>	0.357	0.026			
10474 (Sub 97)	<i>Meas</i>	2.059	1.140	1.940	5.939	-1.820
	<i>Pred</i>	0.323	0.027			
15253 (Sub 101)	<i>Meas</i>	0.270	0.260	0.113	0.497	0.043
	<i>Pred</i>	0.257	0.021			
15361 (Sub 108)	<i>Meas</i>	0.267	0.164	0.309	0.885	-0.352
	<i>Pred</i>	0.637	0.327			

Table 9. Measured and predicted nitrogen concentrations.

Sampling Station		Average	Median	SD	Plus 2 SD	Minus 2 SD
18302 (Sub 102)	<i>Meas</i>	5.542	5.825	2.429	10.400	0.685
	<i>Pred</i>	2.802	2.467			
14477 (Sub 104)	<i>Meas</i>	1.651	1.410	0.904	3.460	-0.157
	<i>Pred</i>	1.391	1.303			
10532 (Sub 99)	<i>Meas</i>	1.659	1.394	1.552	4.763	-1.445
	<i>Pred</i>	1.485	1.420			
10633 (Sub 100)	<i>Meas</i>	0.931	0.875	0.548	2.028	-0.165
	<i>Pred</i>	1.676	1.571			
16076 (Sub 26)	<i>Meas</i>	1.126	1.010	0.777	2.679	-0.427
	<i>Pred</i>	1.211	1.115			
10475 (Sub 98)	<i>Meas</i>	0.968	0.930	0.365	1.698	0.237
	<i>Pred</i>	1.643	1.624			
10474 (Sub 97)	<i>Meas</i>	1.926	1.510	1.307	4.540	-0.689
	<i>Pred</i>	1.796	1.606			
15253 (Sub 101)	<i>Meas</i>	1.185	1.070	0.492	2.169	0.201
	<i>Pred</i>	1.173	1.110			
15361 (Sub 108)	<i>Meas</i>	0.847	0.590	0.791	2.429	-0.735
	<i>Pred</i>	2.416	2.286			

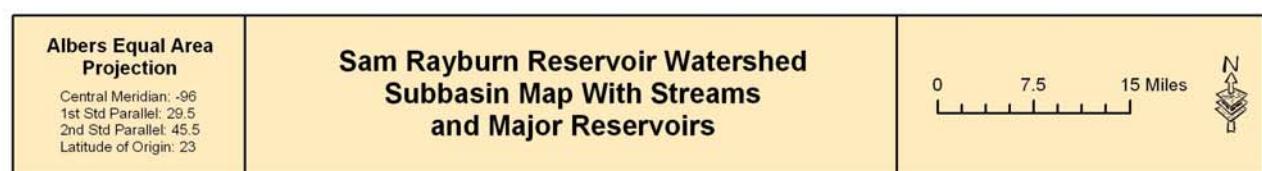
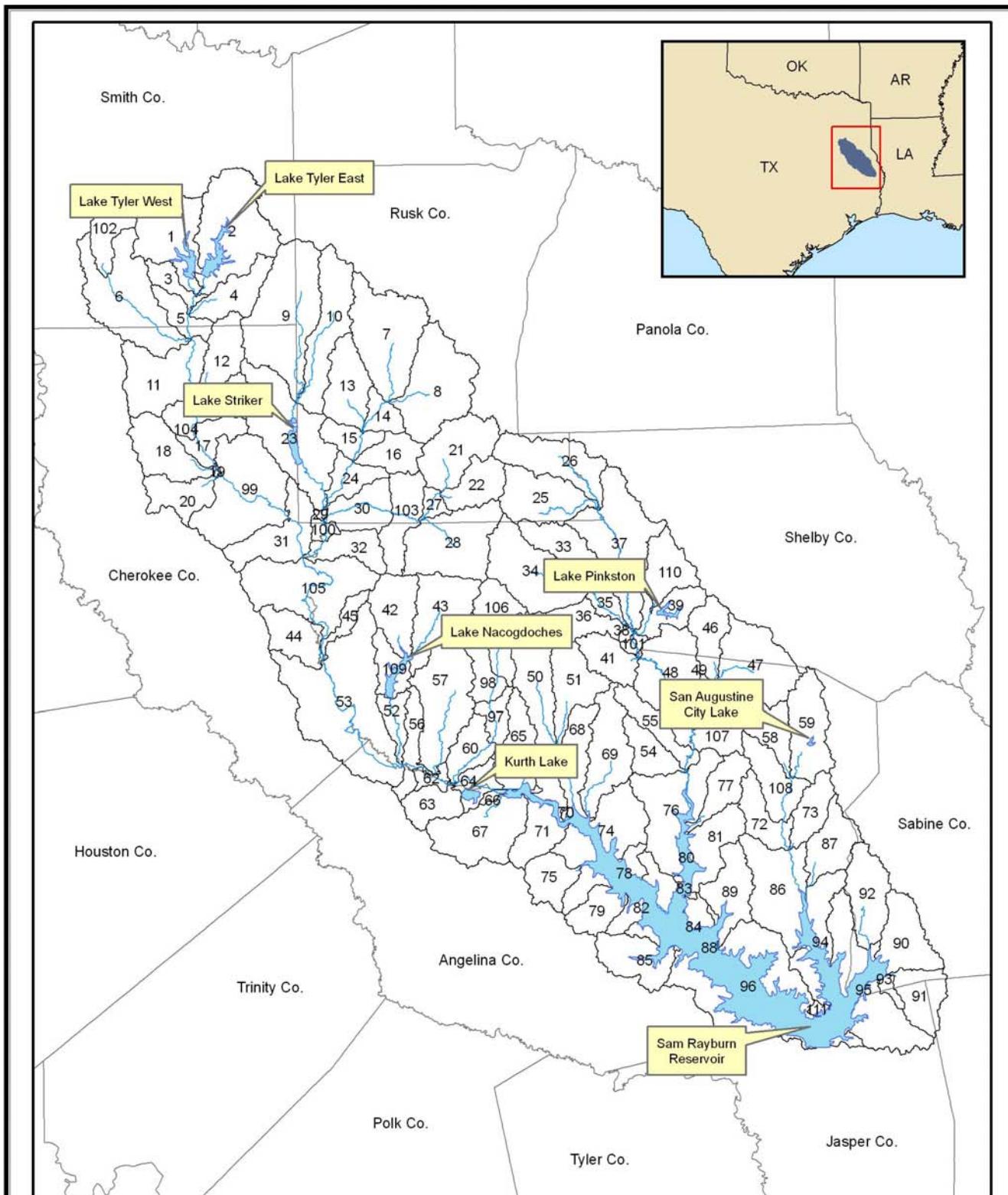


Figure 1. Sam Rayburn Watershed subbasin map with major streams and reservoirs.

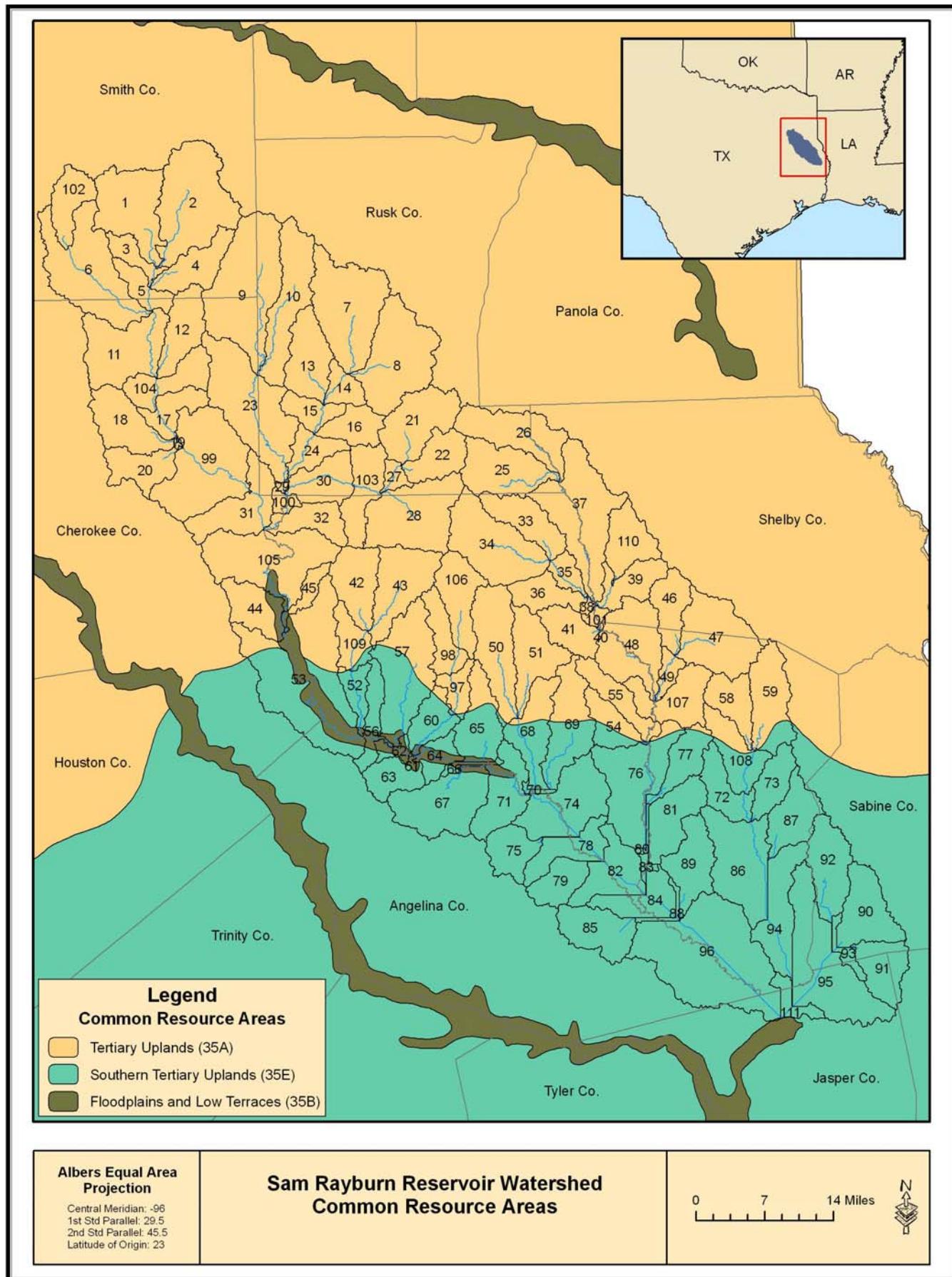


Figure 2. Sam Rayburn Watershed common resource areas.

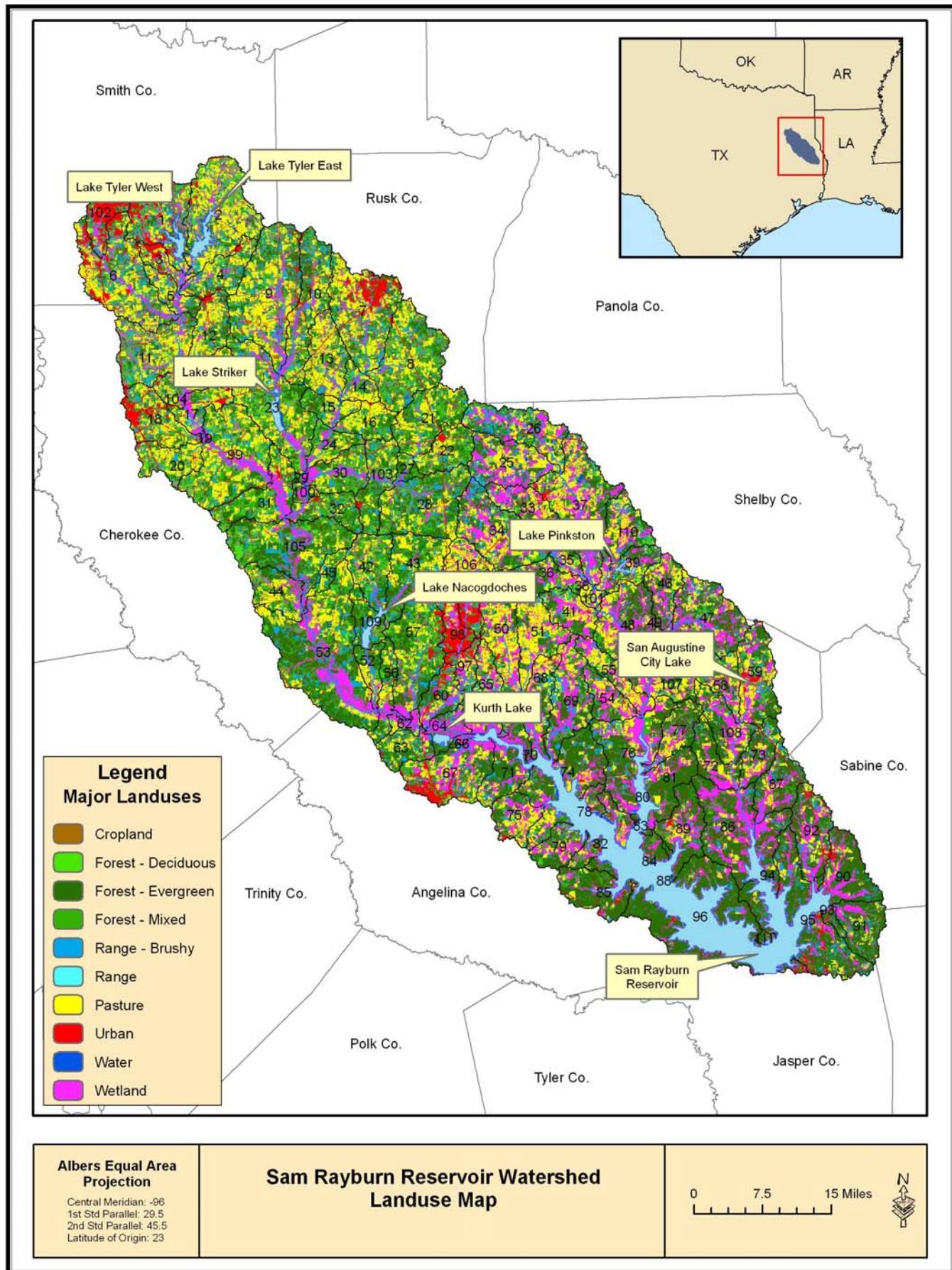


Figure 3.Sam Rayburn Watershed land use/cover map.

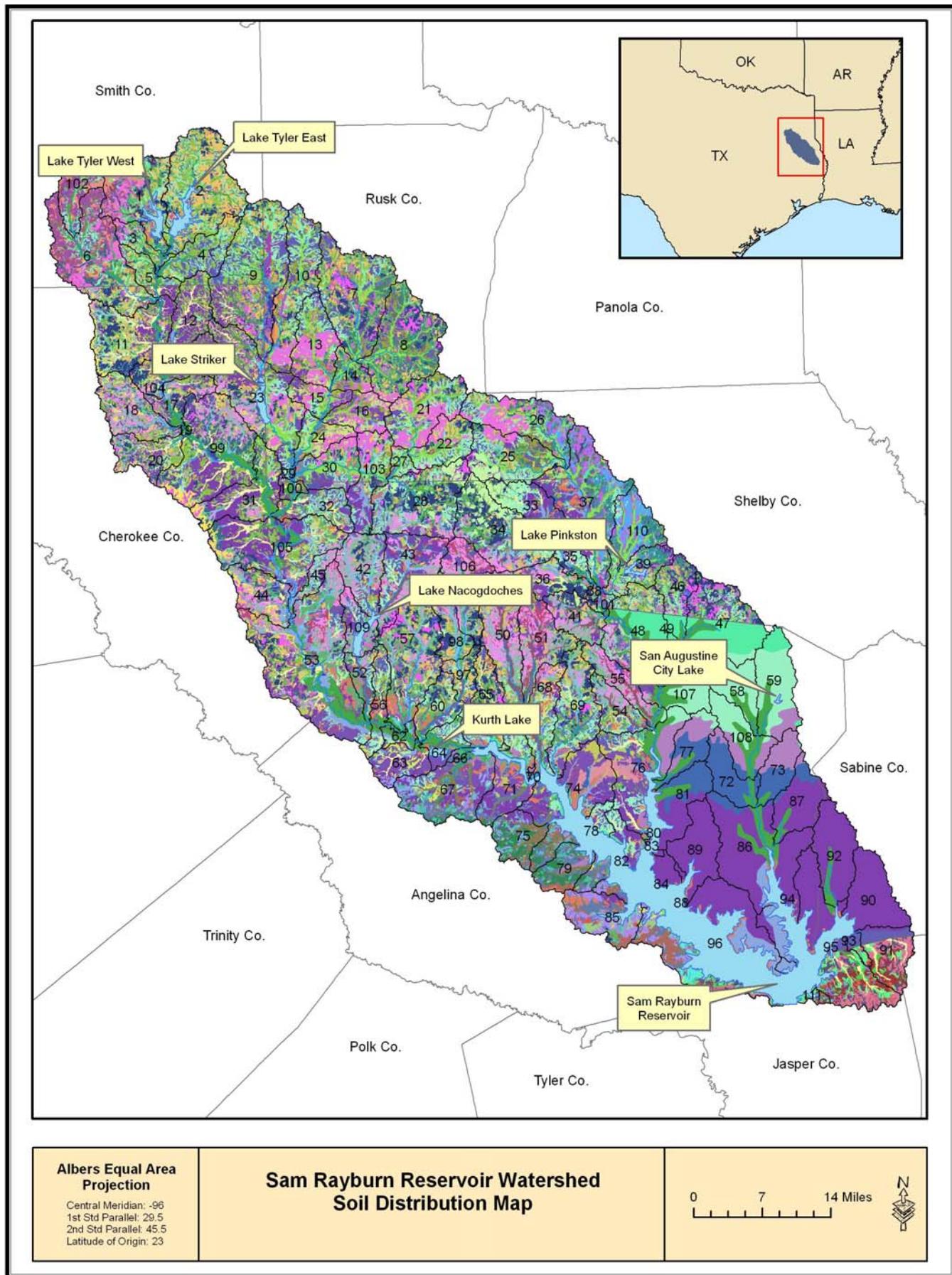


Figure 4. Sam Rayburn Watershed SSURGO soil map.

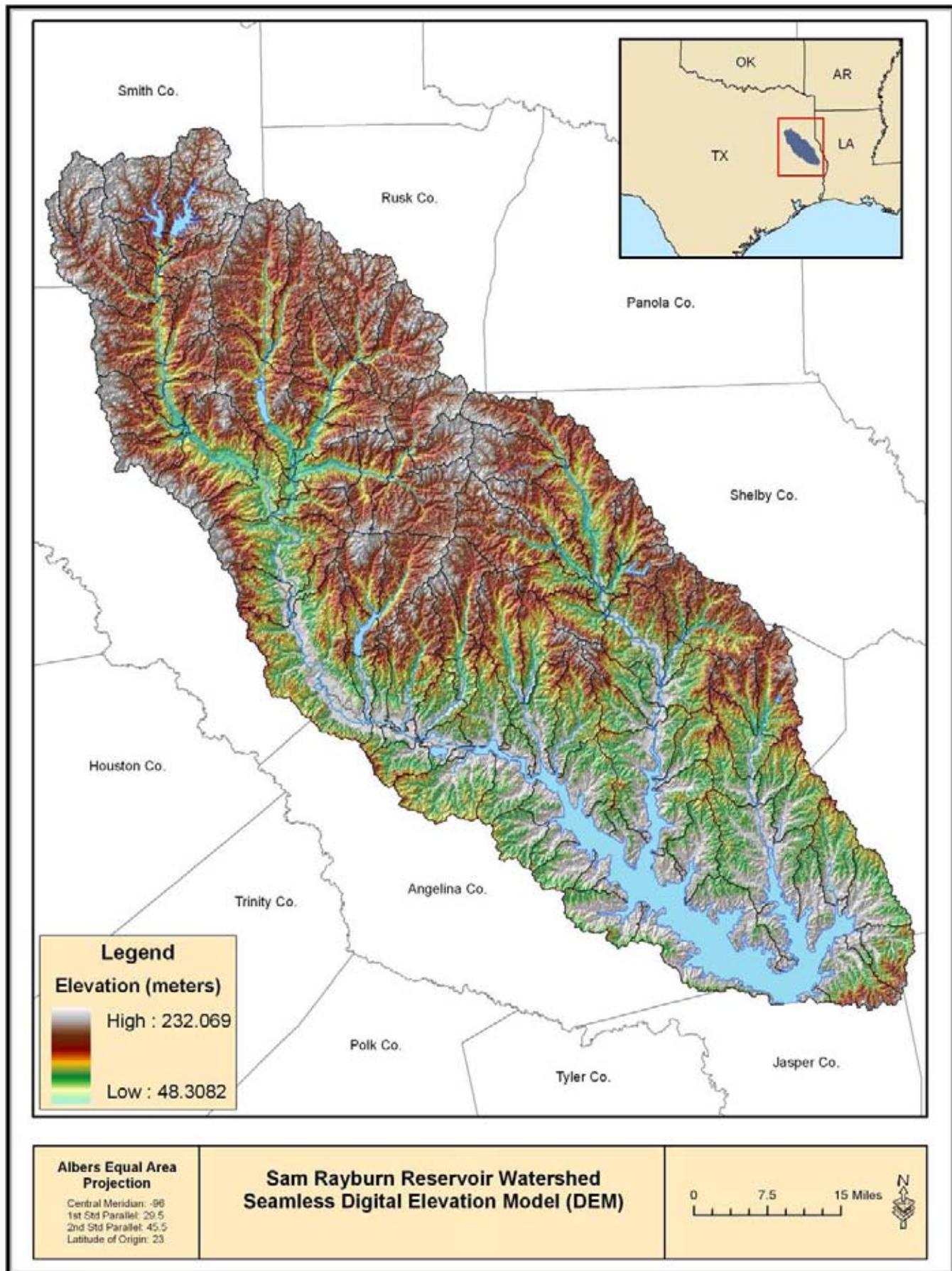


Figure 5. Sam Rayburn Watershed seamless digital elevation model.

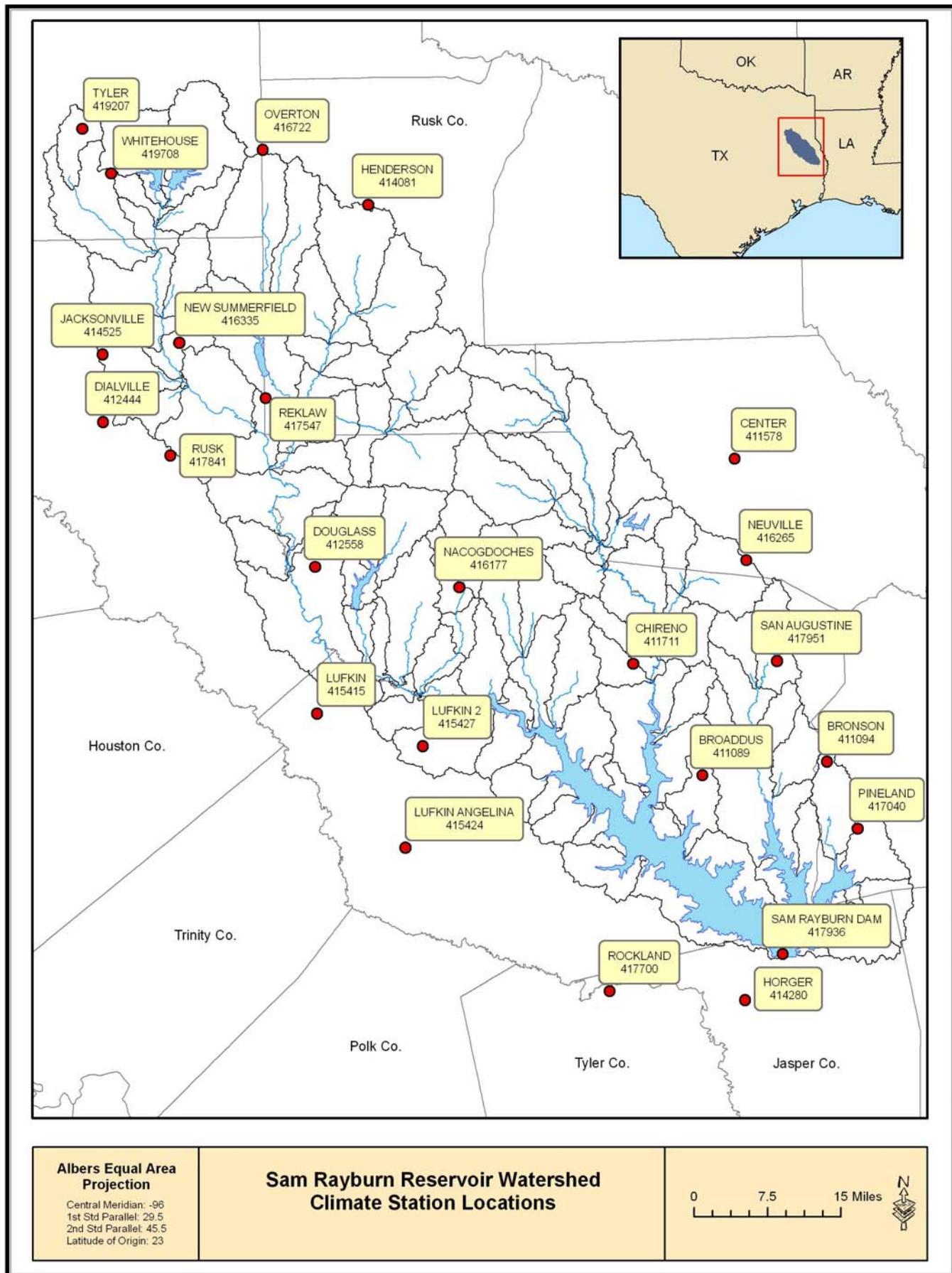


Figure 6. Sam Rayburn Watershed climate station locations.

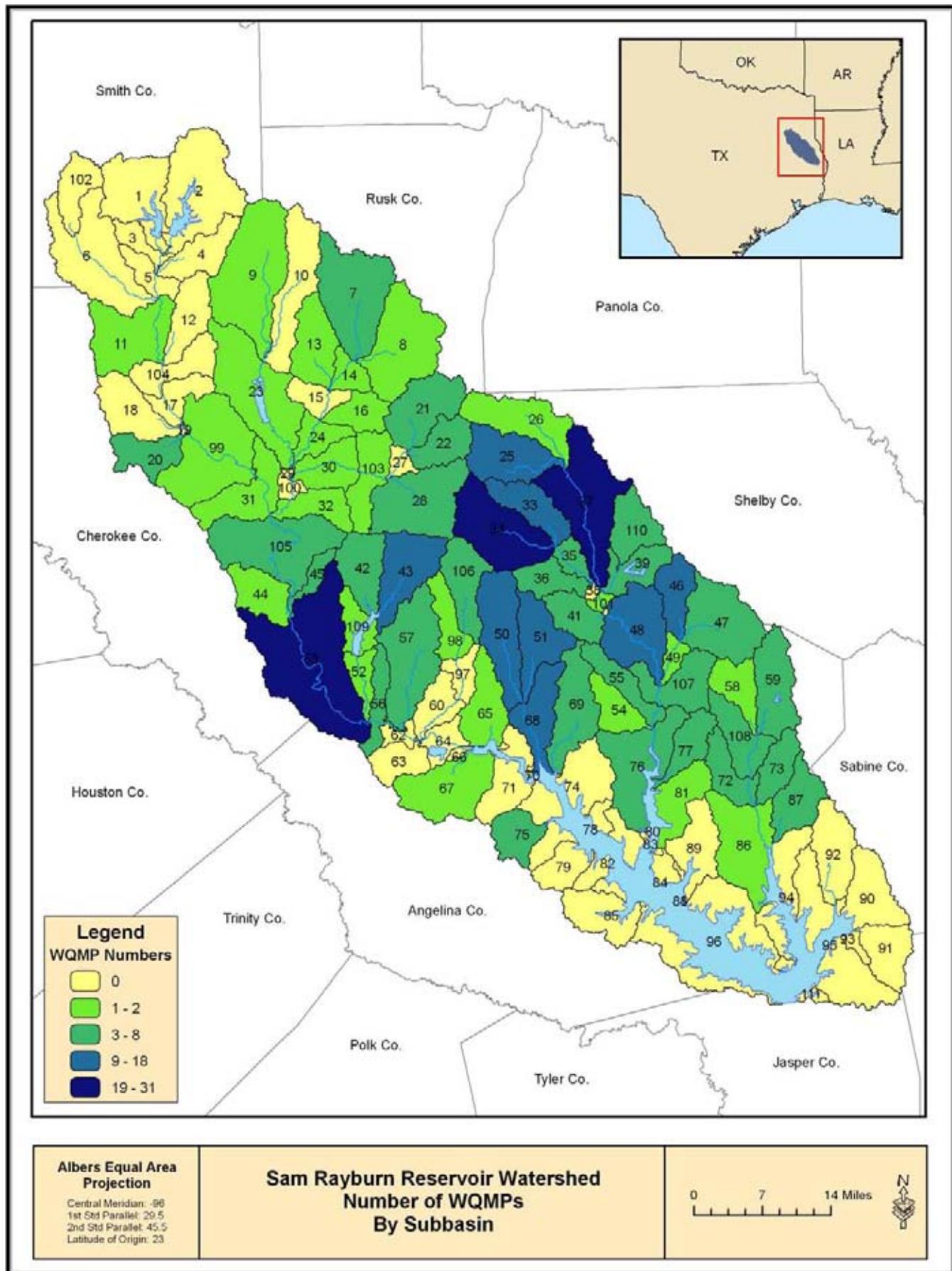


Figure 7. Sam Rayburn Watershed number of WQMPs by subbasin.

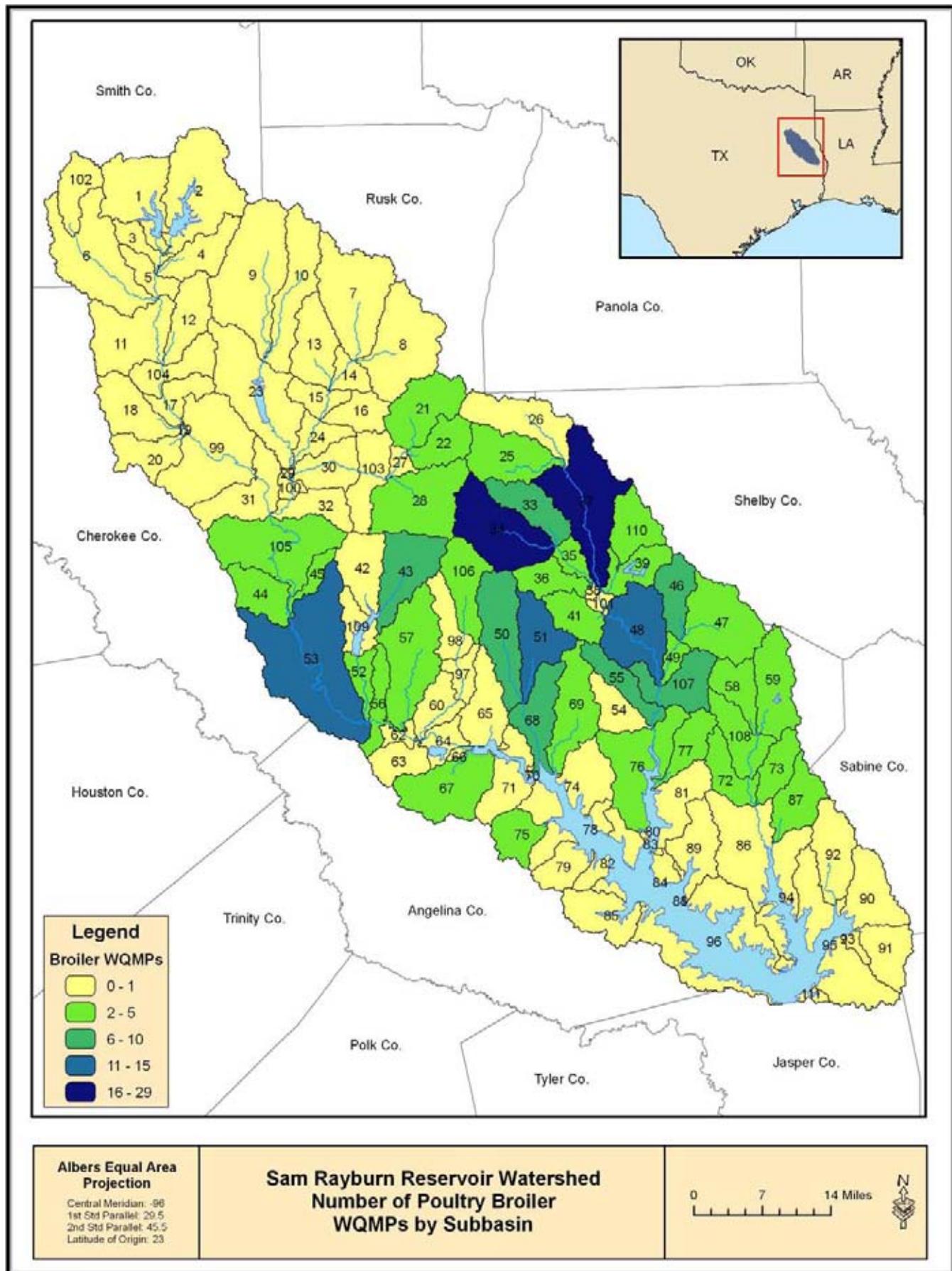


Figure 8. Sam Rayburn Watershed number of broiler WQMPs by subbasin.

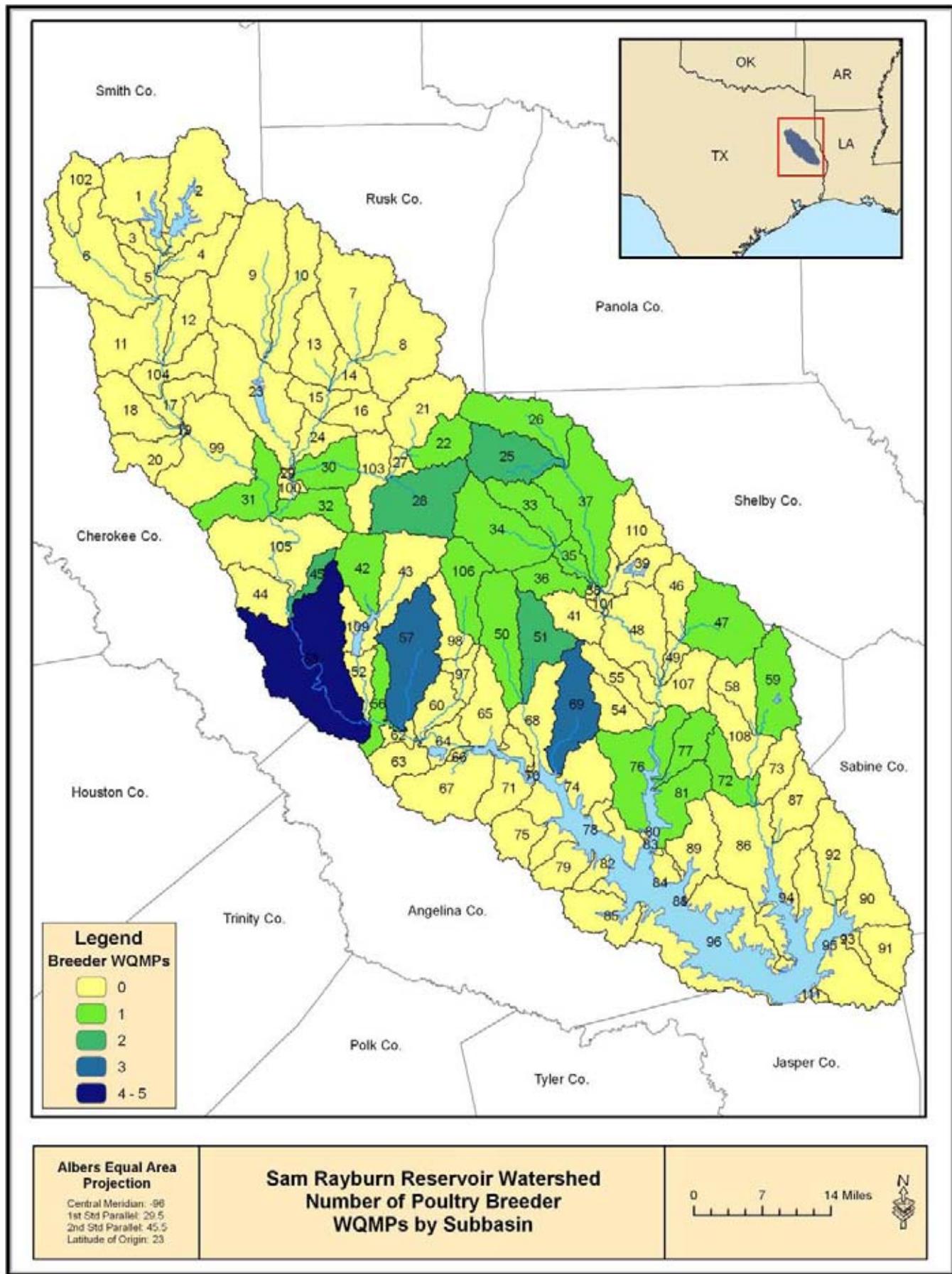


Figure 9. Sam Rayburn Watershed number of breeder WQMPs by subbasin.

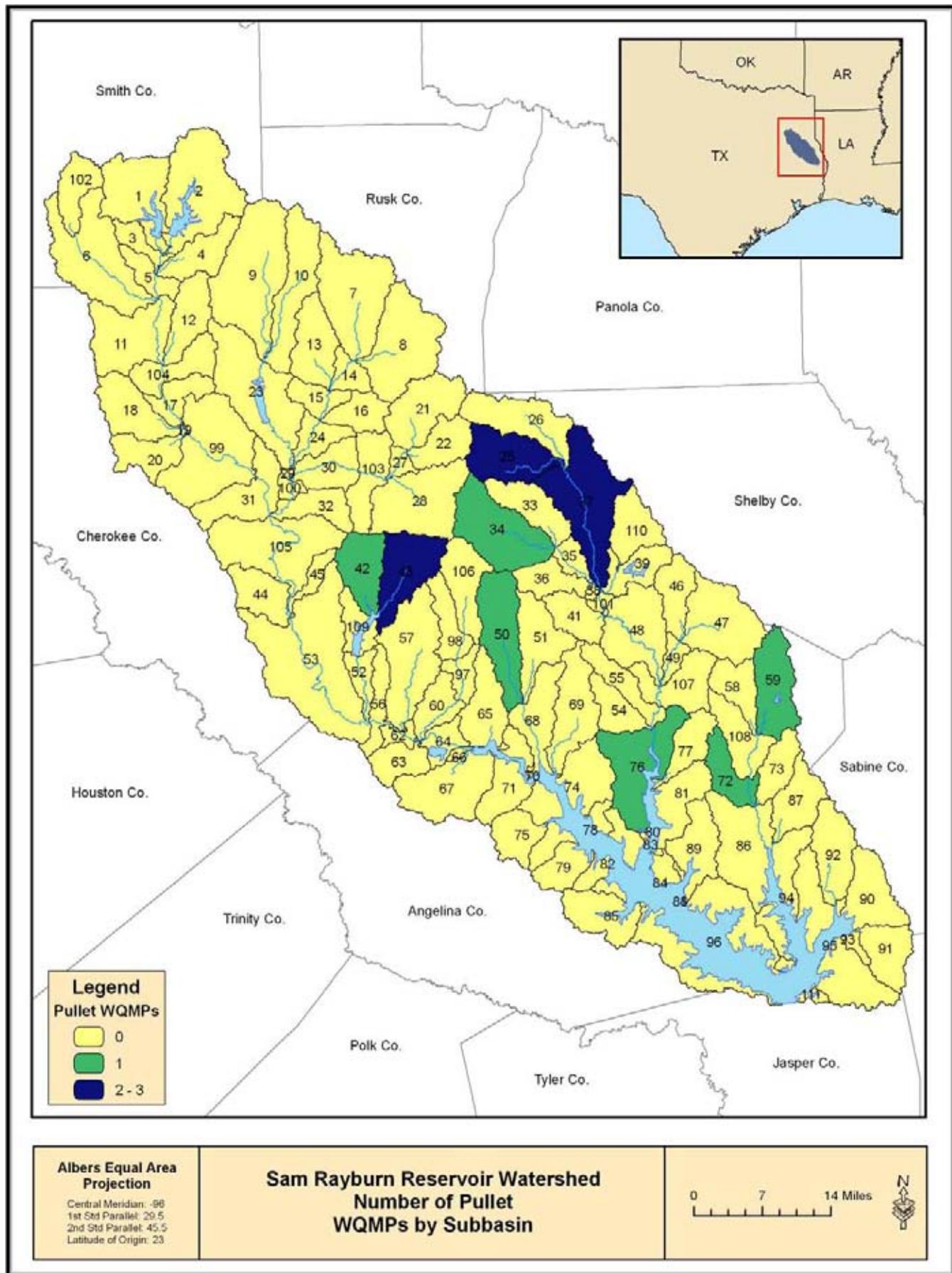


Figure 10. Sam Rayburn Watershed number of pullet WQMPs by subbasin.

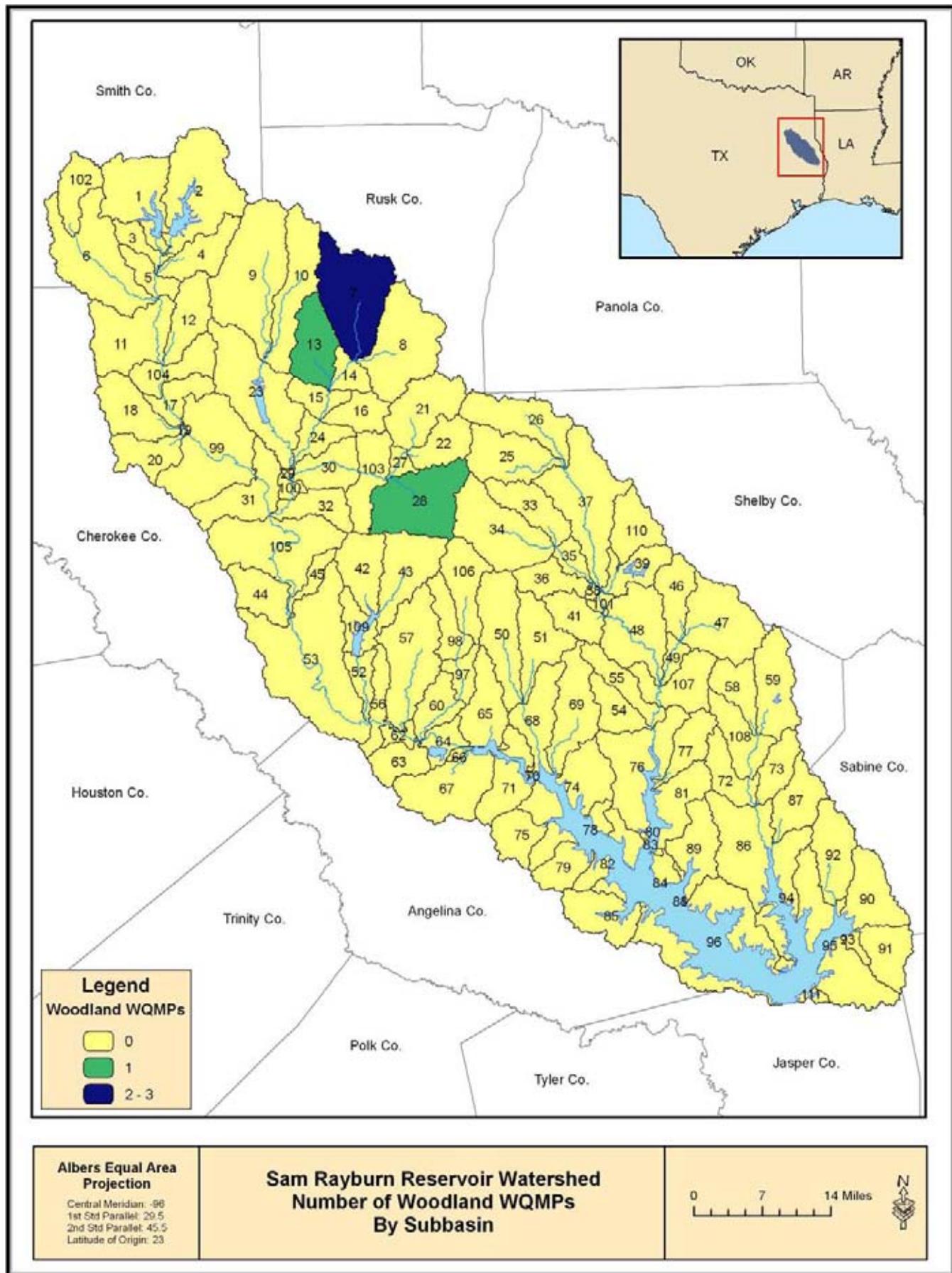


Figure 11. Sam Rayburn Watershed number of woodland WQMPs by subbasin.

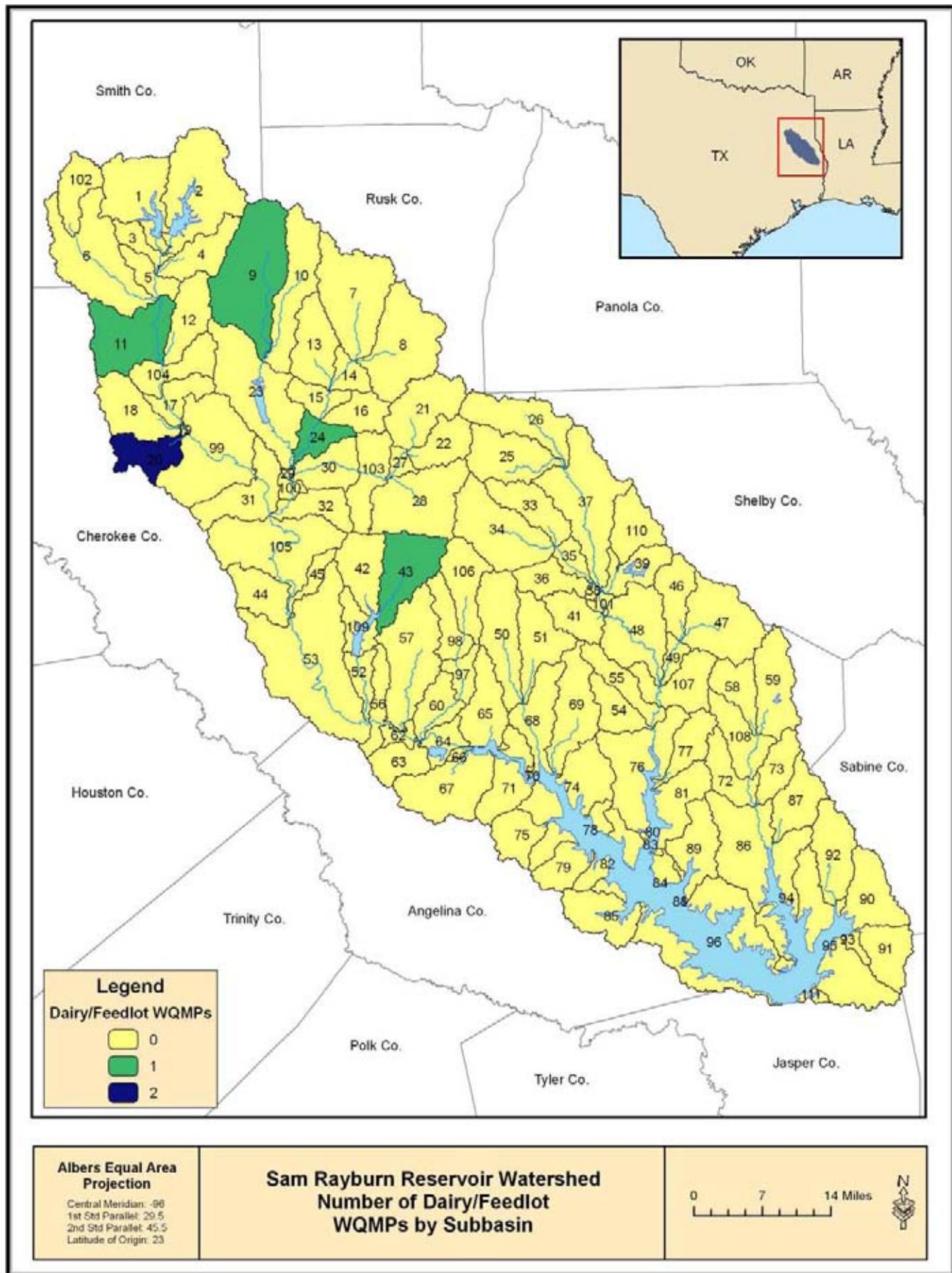


Figure 12. Sam Rayburn Watershed number of dairy/feedlot WQMPs by subbasin.

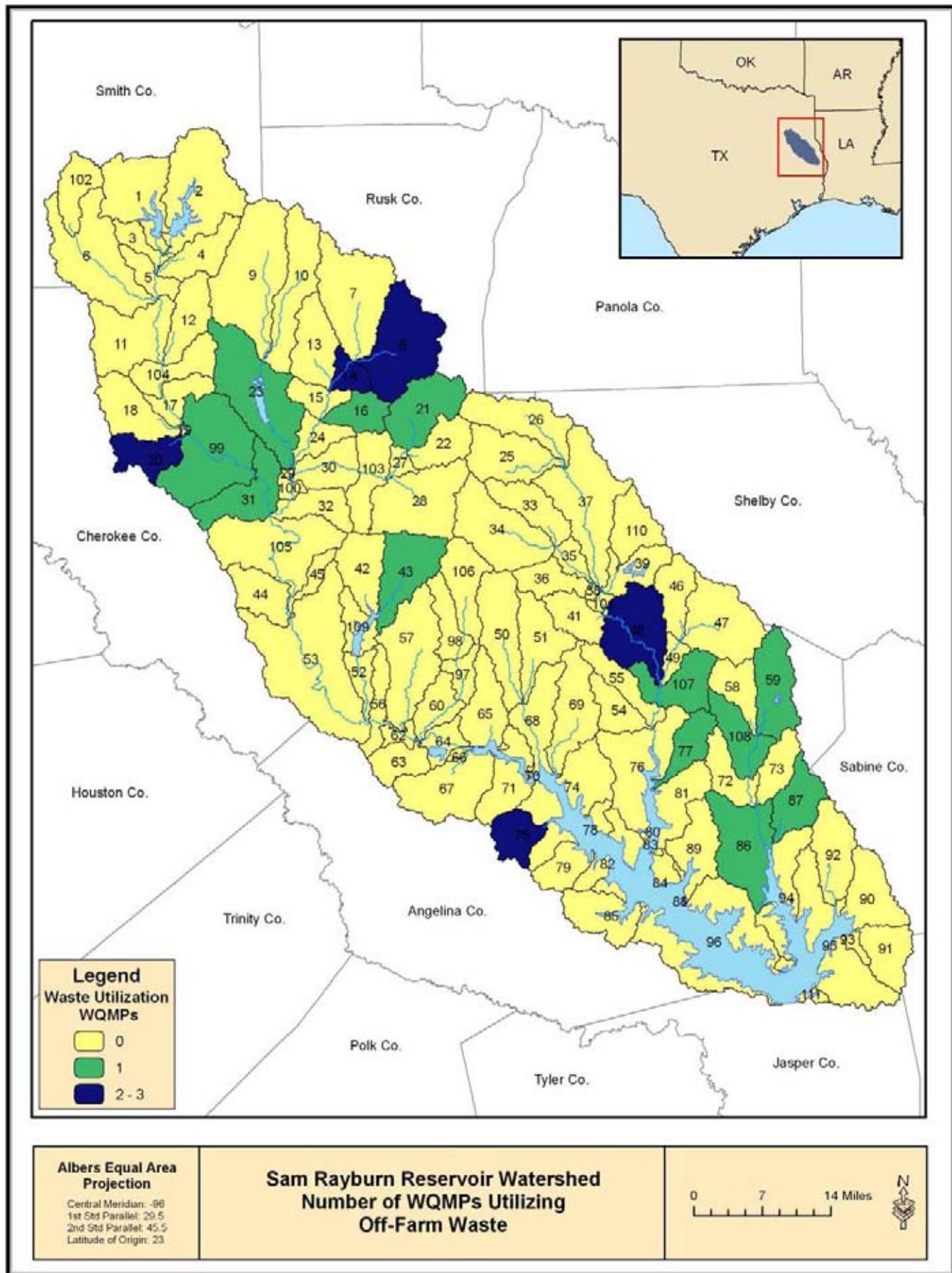


Figure 13. Sam Rayburn Watershed number of WQMPs utilizing off-farm waste by subbasin.

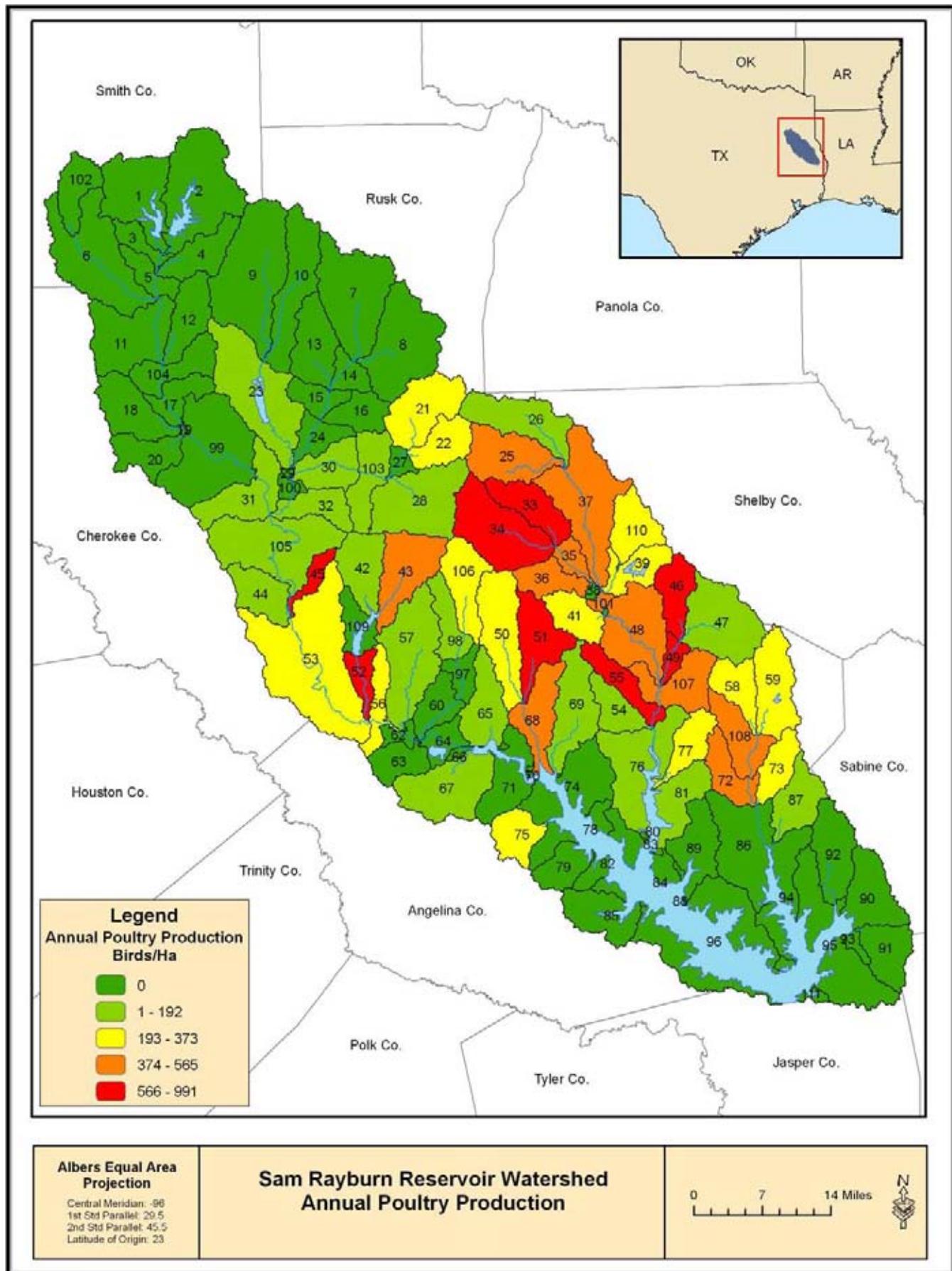


Figure 14. Sam Rayburn Watershed annual poultry production by subbasin.

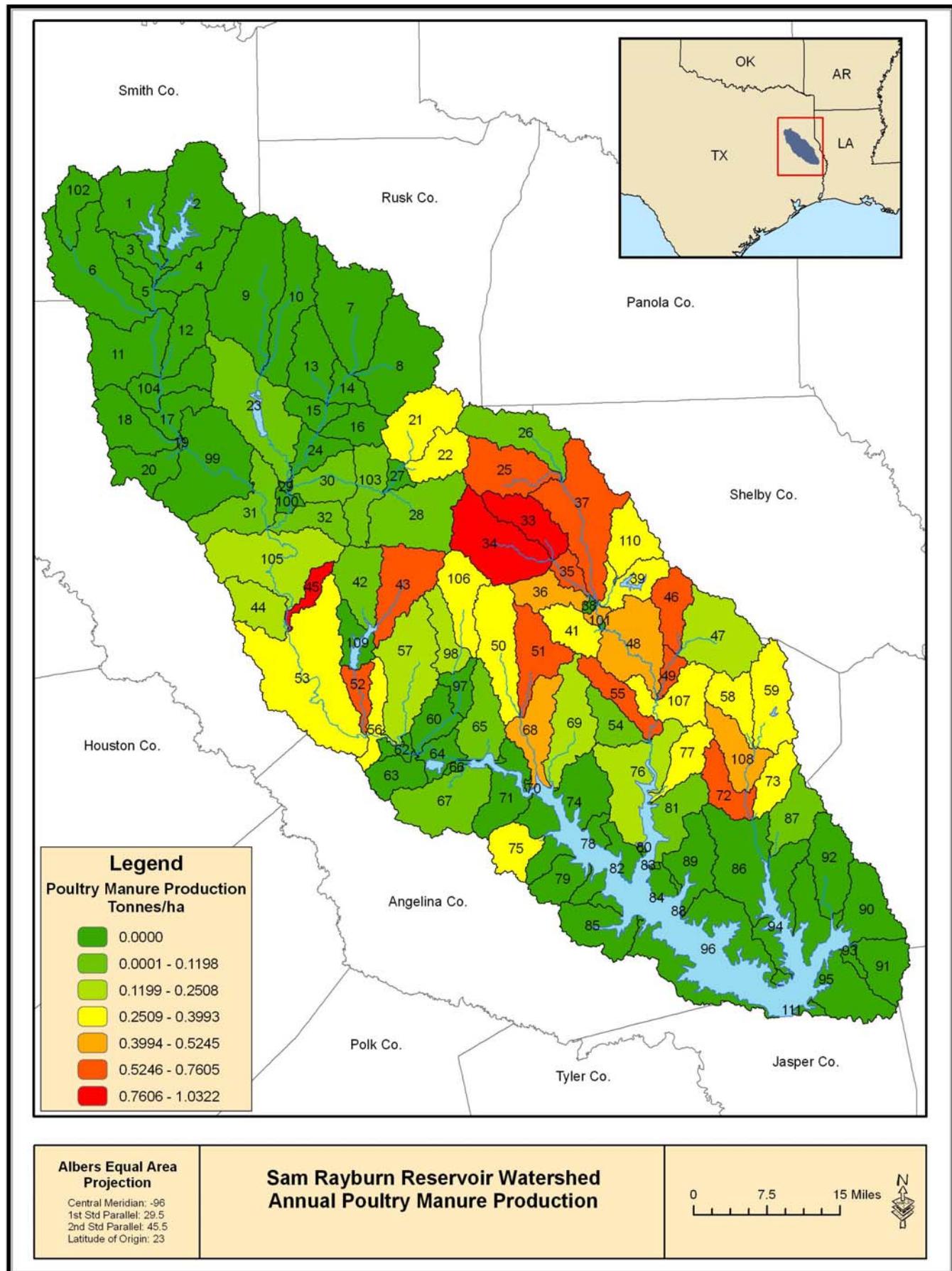


Figure 15. Sam Rayburn Watershed annual poultry manure production by subbasin.

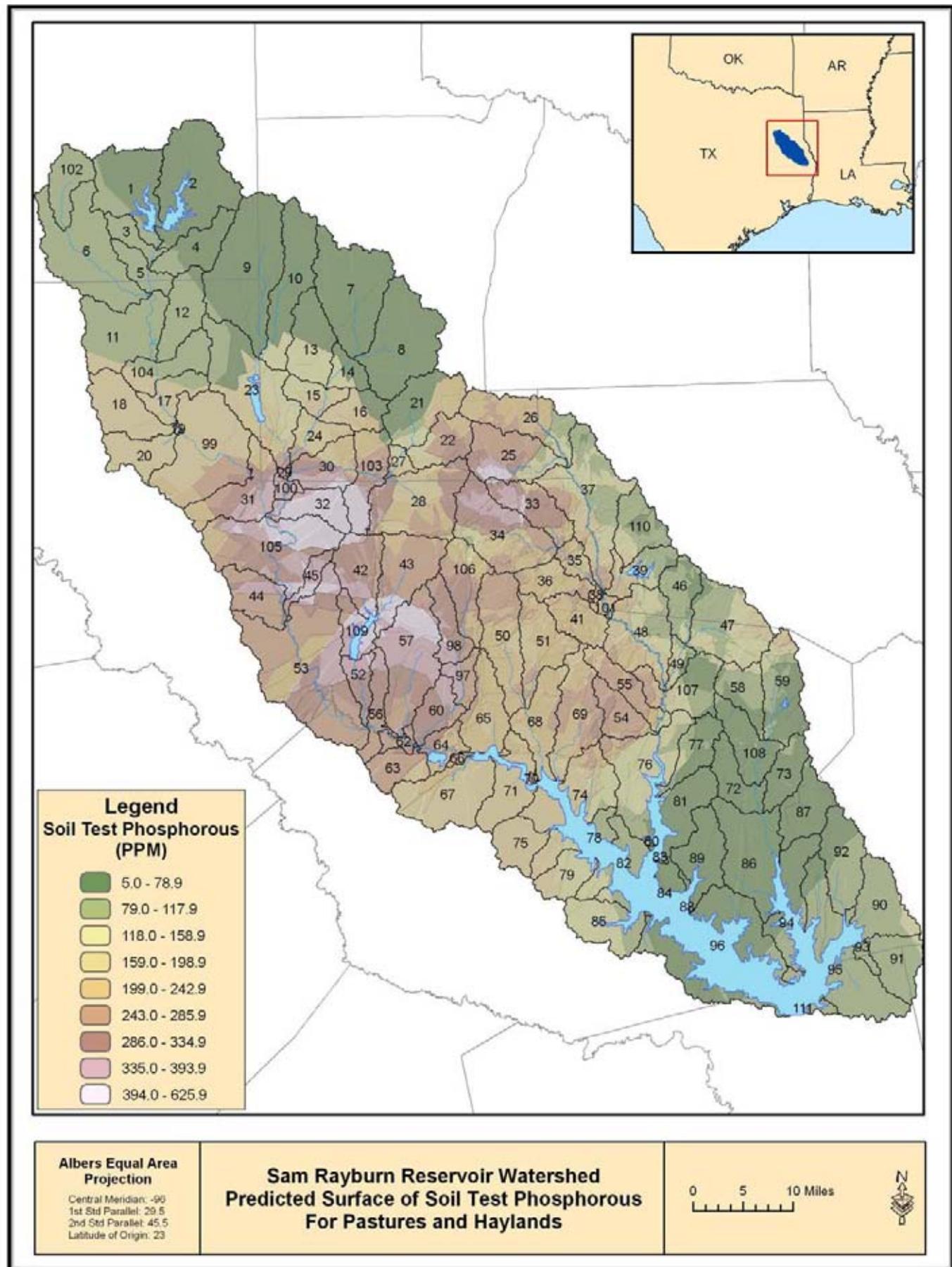


Figure 16. Sam Rayburn Watershed – Predicted surface of soil test phosphorous for pastures and hayfields.

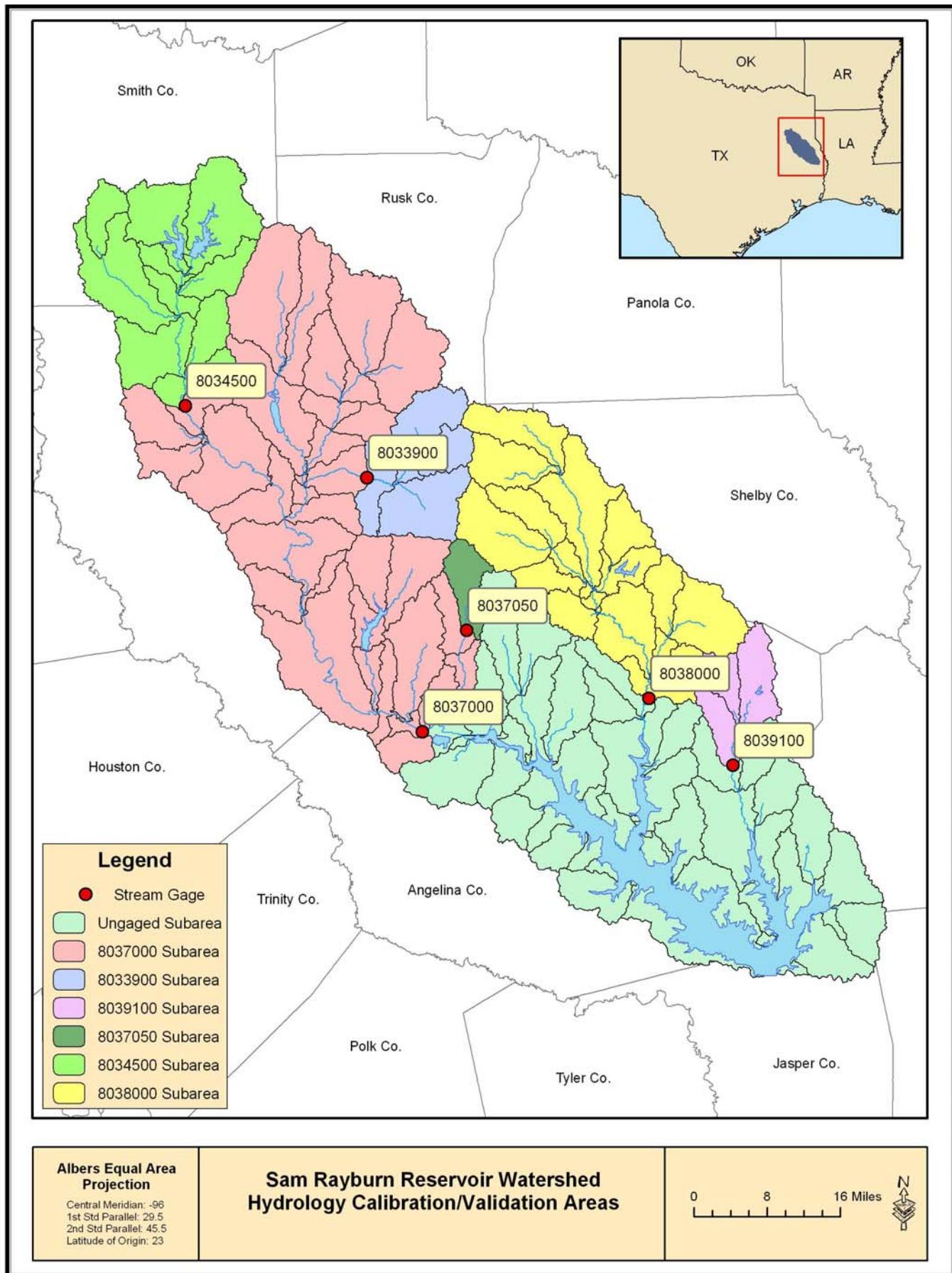


Figure 17. Sam Rayburn Watershed hydrology calibration/validation areas.

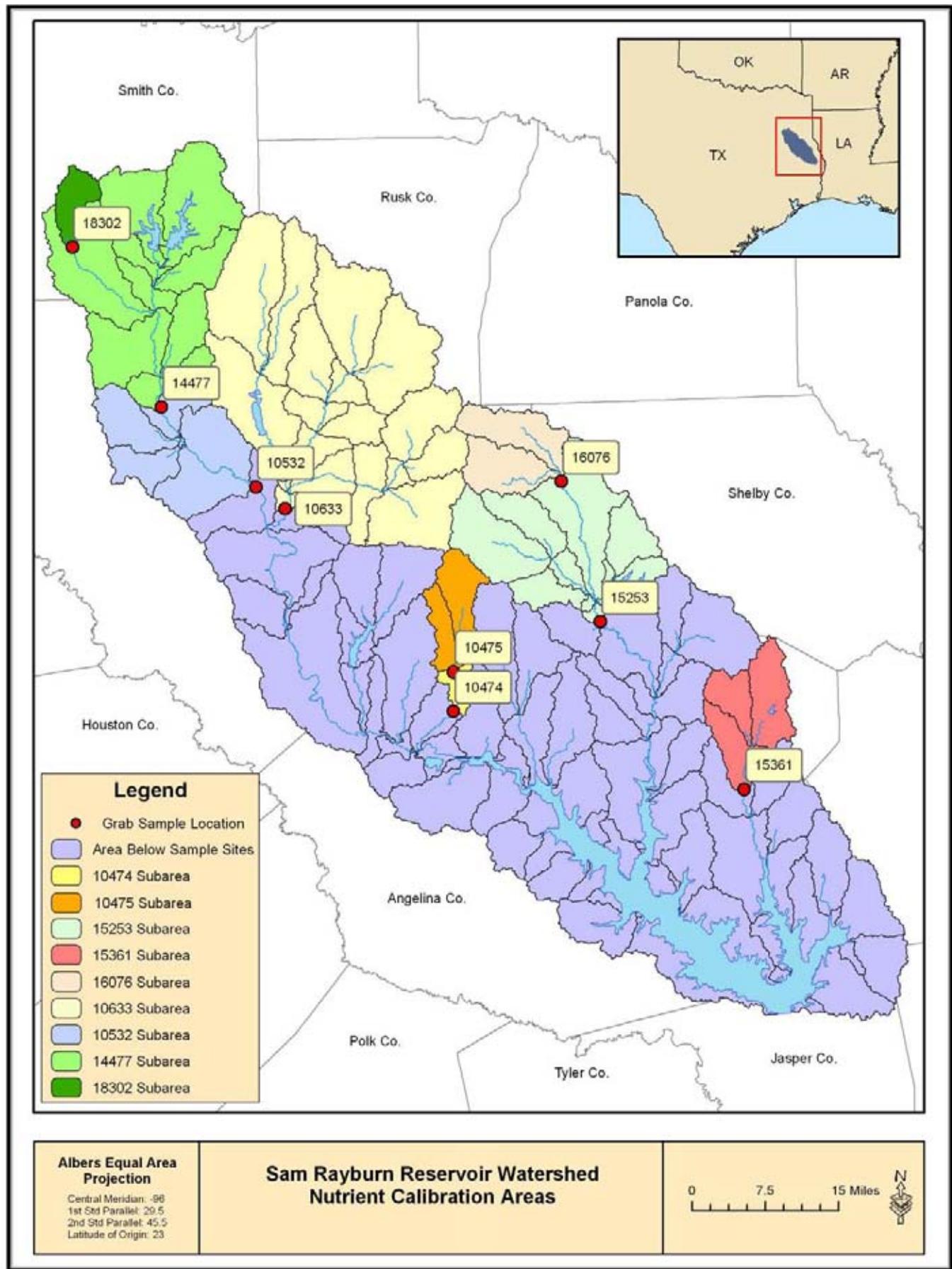


Figure 18. Sam Rayburn Watershed nutrient calibration areas.

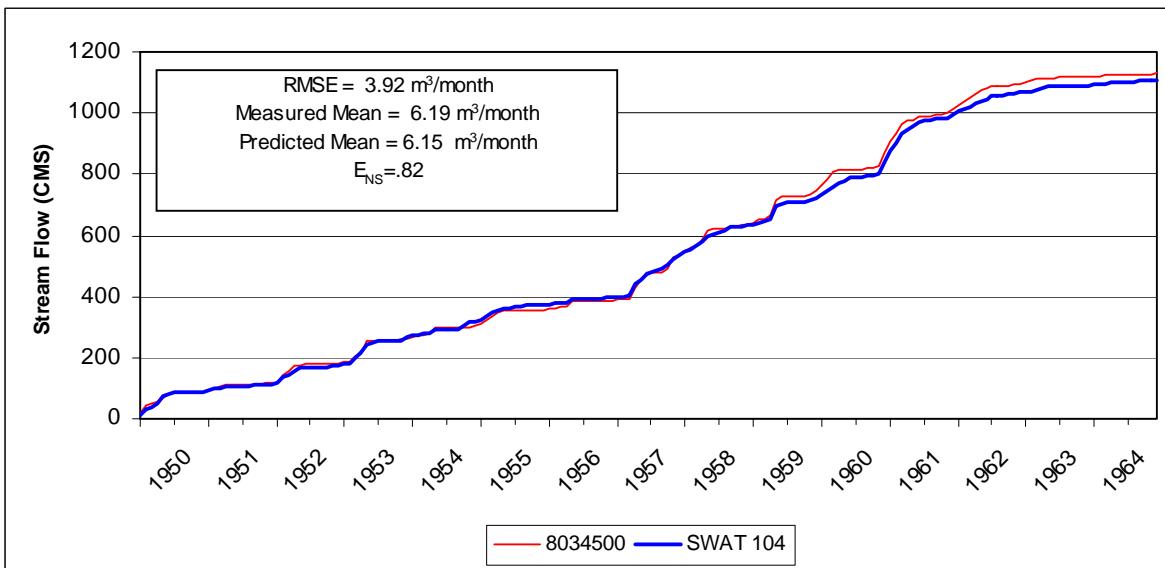


Figure 19. Cumulative monthly measured and predicted stream flow at gage 8034500 (Mud Creek near Jacksonville, TX), 1/1/1950 through 12/31/1964. This period was used for flow calibration. Monthly statistics are shown in the box.

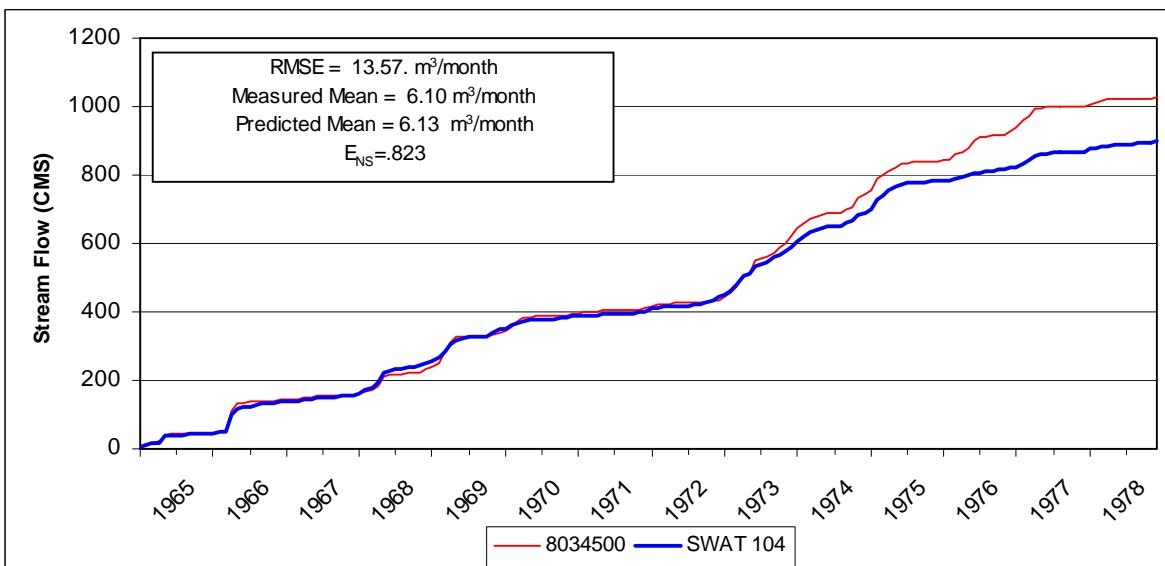


Figure 20. Cumulative monthly measured and predicted stream flow at gage 8034500 (Mud Creek near Jacksonville, TX), 1/1/1965 through 12/31/1978. This period was used for flow validation. Monthly statistics are shown in the box.

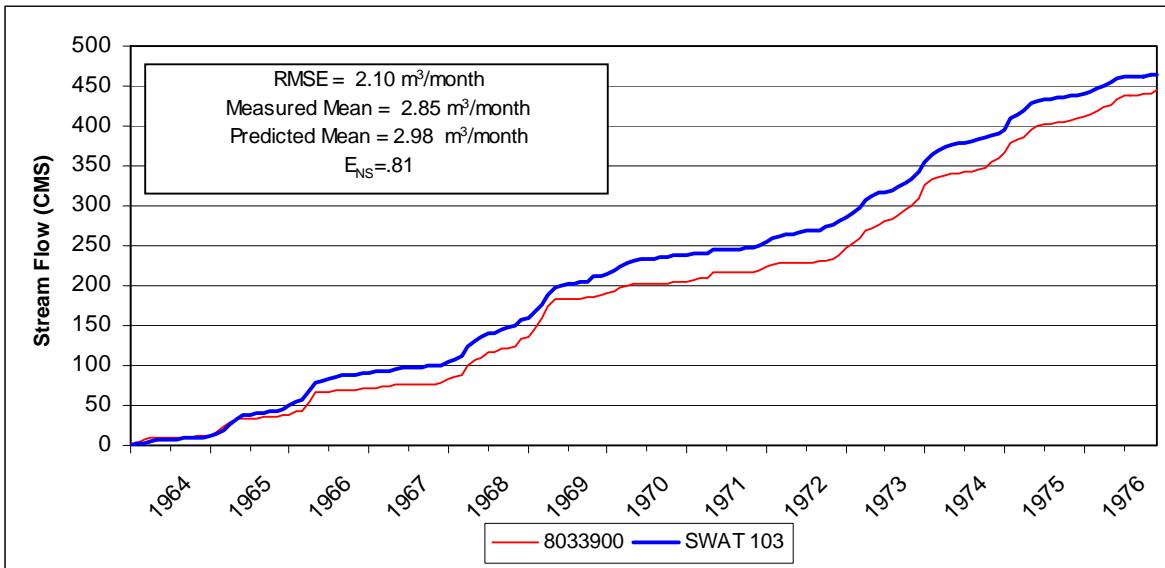


Figure 21. Cumulative monthly measured and predicted stream flow at gage 8033900 (East Fork of the Angelina River near Cushing, TX), 1/1/1964 through 12/31/1976. This period was used for flow calibration. Monthly statistics are shown in the box.

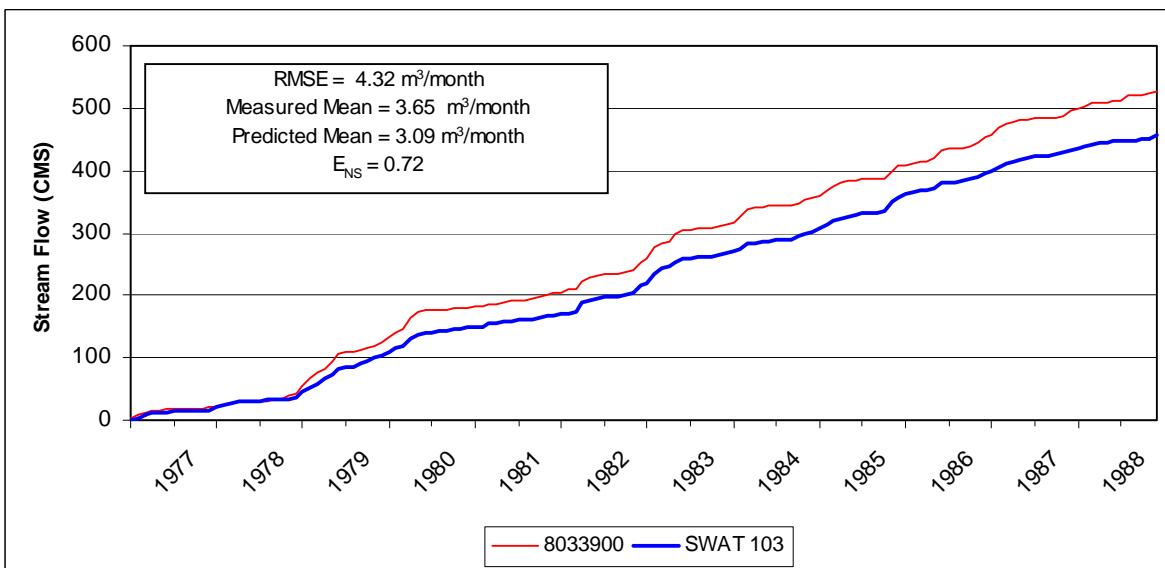


Figure 22. Cumulative monthly measured and predicted stream flow at gage 8033900 (East Fork of the Angelina River near Cushing, TX), 1/1/1977 through 9/30/1988. This period was used for flow validation. Monthly statistics are shown in the box.

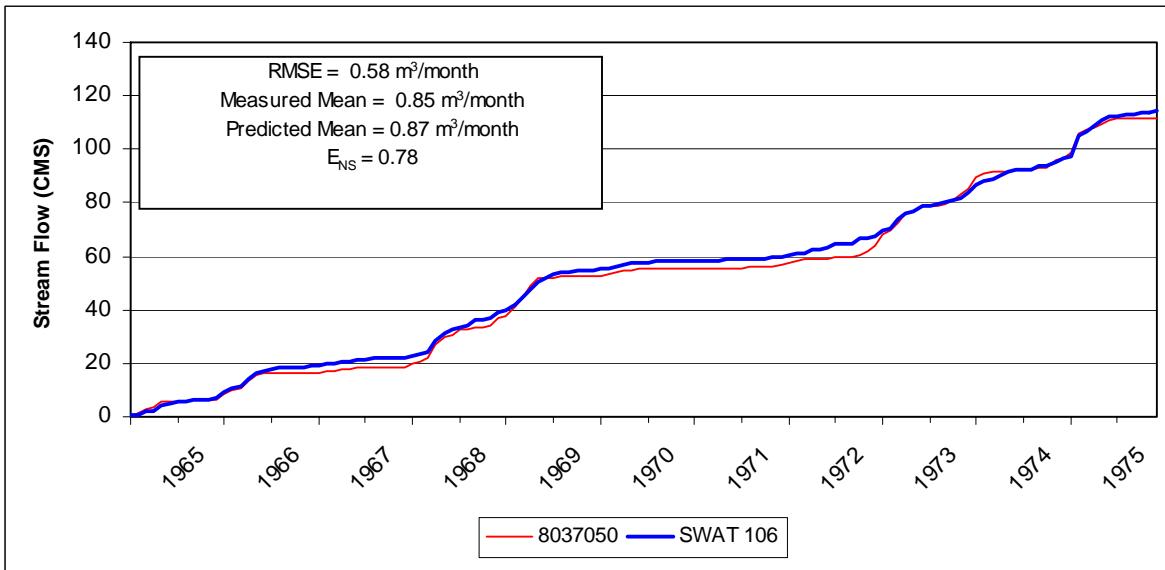


Figure 23. Cumulative monthly measured and predicted stream flow at gage 8037050 (Lanana Bayou near Nacogdoches, TX), 1/1/1965 through 12/31/1975. This period was used for flow calibration. Monthly statistics are shown in the box.

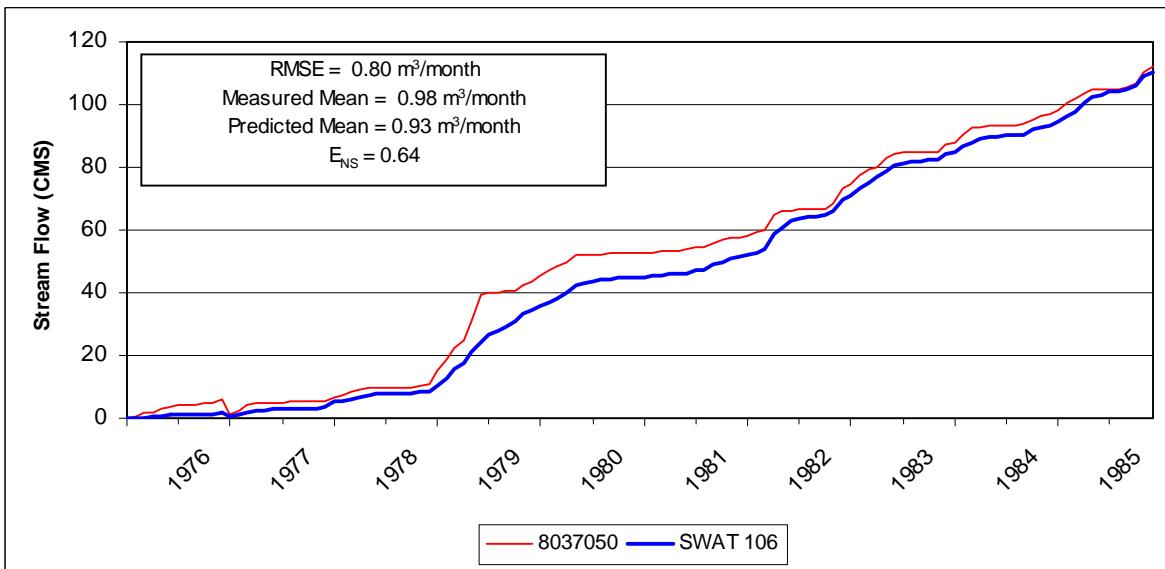


Figure 24. Cumulative monthly measured and predicted stream flow at gage 8037050 (Lanana Bayou near Nacogdoches, TX), 1/1/1976 through 12/31/1985. This period was used for flow validation. Monthly statistics are shown in the box.

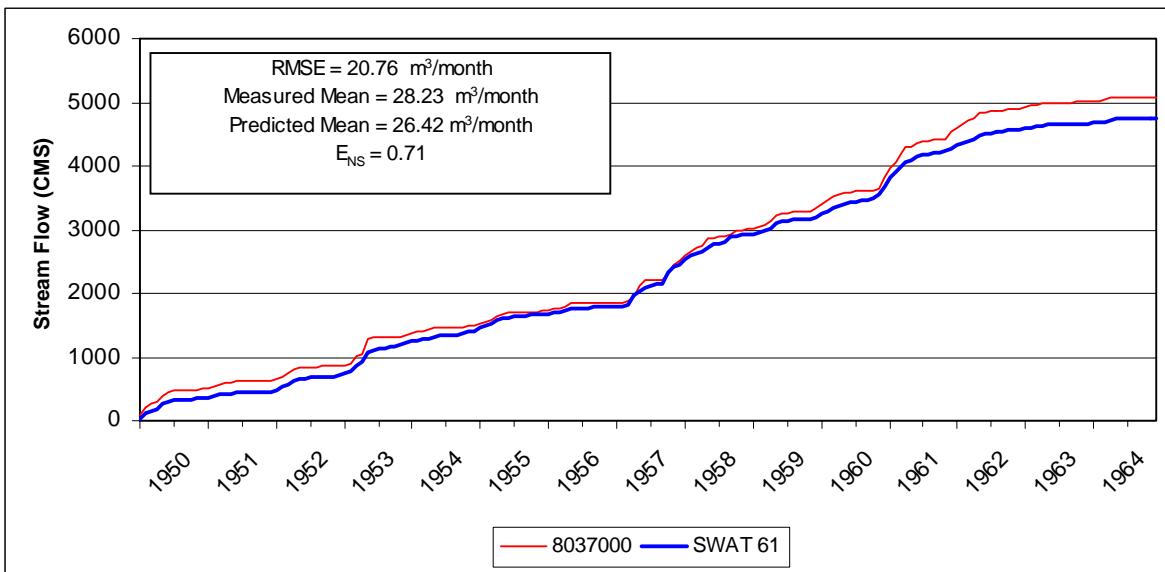


Figure 25. Cumulative monthly measured and predicted stream flow at gage 8037000 (Angelina River near Lufkin, TX), 1/1/1950 through 12/31/1964. This period was used for flow calibration. Monthly statistics are shown in the box.

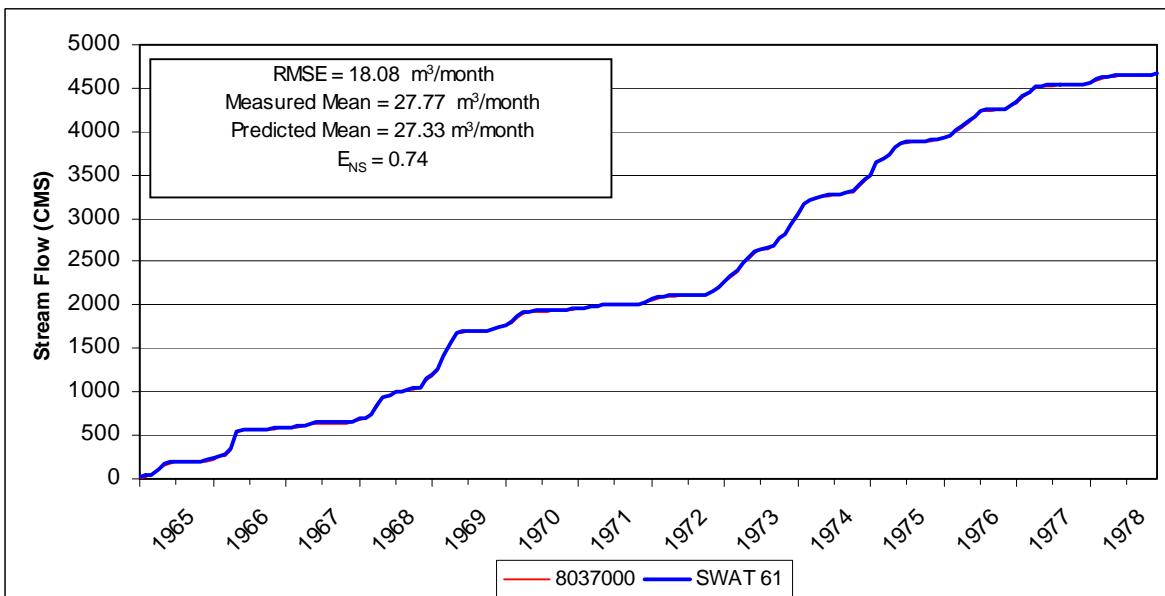


Figure 26. Cumulative monthly measured and predicted stream flow at gage 8037000 (Angelina River near Lufkin, TX), 1/1/1965 through 12/31/1978. This period was used for flow validation. Monthly statistics are shown in the box.

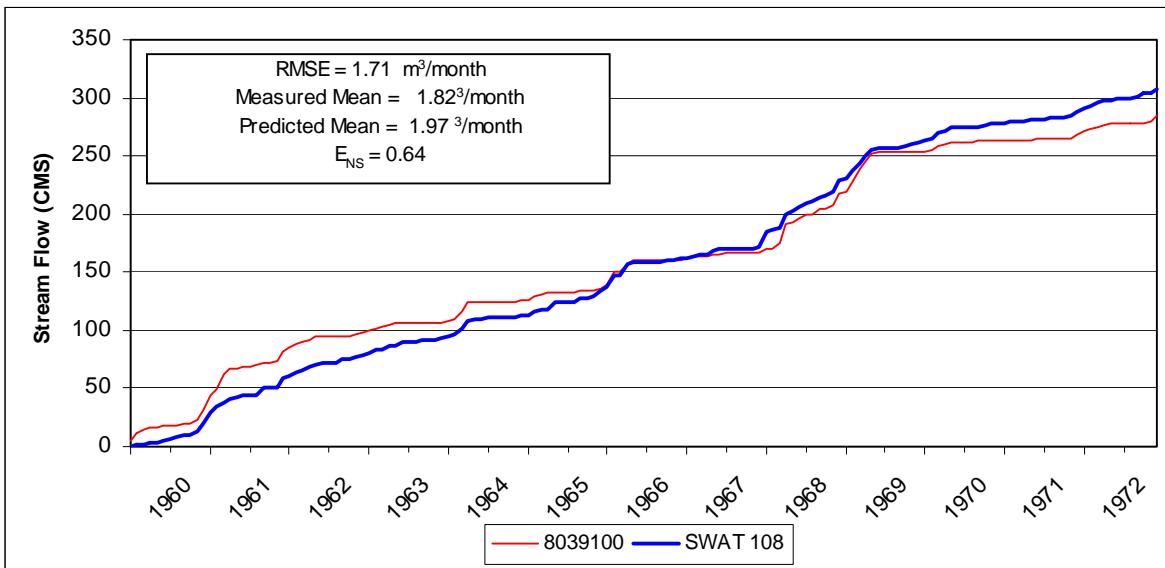


Figure 27. Cumulative monthly measured and predicted stream flow at gage 8039100 (Ayish Bayou near San Augustine, TX), 1/1/1960 through 12/31/1972. This period was used for flow calibration. Monthly statistics are shown in the box.

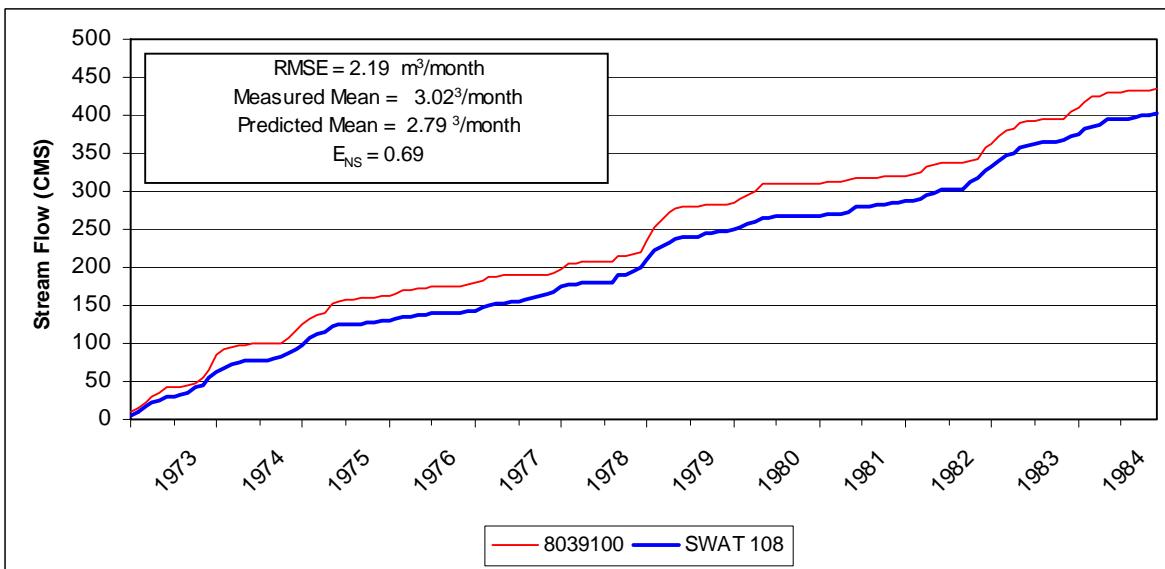


Figure 28. Cumulative monthly measured and predicted stream flow at gage 8039100 (Ayish Bayou near San Augustine, TX), 1/1/1973 through 12/31/1984. This period was used for flow validation. Monthly statistics are shown in the box.

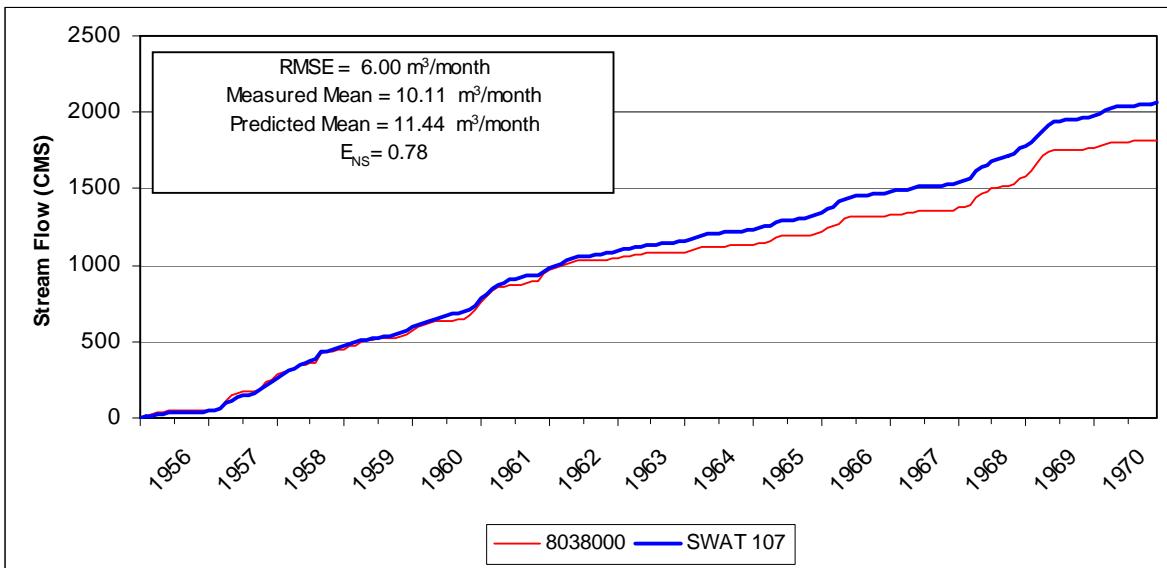


Figure 29. Cumulative monthly measured and predicted stream flow at gage 8038000 (Attoyac Bayou near Chireno, TX), 1/1/1956 through 12/31/1970. This period was used for flow calibration. Monthly statistics are shown in the box.

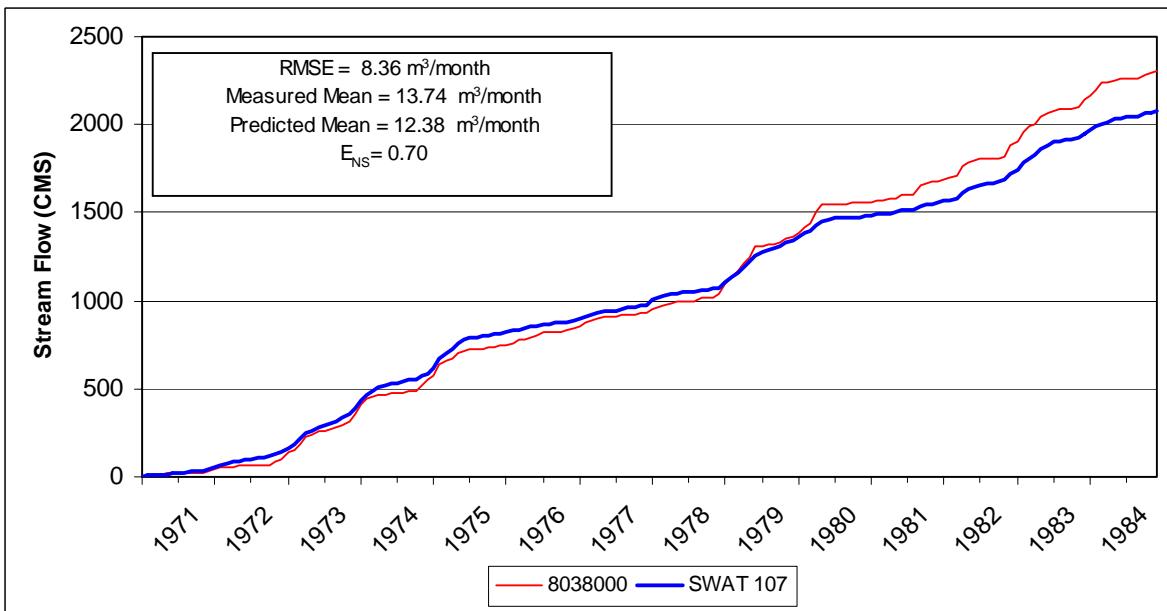


Figure 30. Cumulative monthly measured and predicted stream flow at gage 8038000 (Attoyac Bayou near Chireno, TX), 1/1/1971 through 12/31/1984. This period was used for flow validation. Monthly statistics are shown in the box.

PART 2: BEST MANAGEMENT PRACTICES

Introduction

The objective of this section of the report is to describe the application of the SWAT model for estimating nutrient loading and sediment yield under the existing conditions of the watershed and analyze the effectiveness of the conservation practices applied under the §319(h) and SB503 programs.

Methodology

BMP Scenarios

Two scenarios were constructed in order to estimate the reductions in nutrients and sediment due to implementation of the WQMPs. Each scenario was run for the 30-year period, 1976 through 2005.

- Scenario I – Current conditions scenario representing the conditions in the watershed prior to the implementation of WQMPs.
- Scenario II – Post BMP scenario representing the conditions in the watershed after the implementation of funded WQMPs under the §319(h) and SB503 programs.

Changes in the nutrient and sediment loadings between the pre-BMP and the post-BMP scenarios provide the percentage of reduction in the watershed.

Scenario I - Existing Conditions

This scenario was modeled using the common manure management and application practices that were followed by farmers prior to WQMP development. All poultry litter and dairy/feedlot manure was applied to pasture and hayland land uses at typical application rates in the subbasin near where it was produced. Cropland is essentially not present in this basin, so no litter/manure applications were made to that land use. The traditional litter/manure practices modeled in scenario I included:

- Litter/manure applications were made without regard to soil nutrient levels. A nutrient balance was not developed with regular soil tests. Typical application rates were from 3.5 to 5 tons per acre, often providing much more phosphorous than required by the forage crop.
- Haul distances were short. Fields closer to the production facilities received more litter/manure.
- Soil test phosphorous (STP) was often 250 to 500 PPM or more in these fields receiving heavy litter/manure applications.
- Forage in pastures were typically a mixture of bahia grass and common Bermuda grass. Hayfield forages were usually Coastal Bermuda or a Tifton hybrid.

- About 30 percent of pastures received a hay cutting each year.
- Timing of litter/manure application was made without regard to forage dormancy. In winter months soils are usually near saturation with little forage growth.
- Lastly, litter/manure applications were often made without adequate untreated buffers around wells, streams and ponds.

Broiler, layer, and pullet production all contribute to the total litter production. Each type of operation produces a different amount and quality of litter. The detailed production data available in the WQMPs in the basin provided the needed information on manure quantities, nutrient content, soil nutrient levels, and spatial locations of fields receiving the waste.

Ponds and lakes affect the hydrology by impounding water and trapping nutrients and sediment. Existing ponds and dams were included in scenario I.

Scenario II - Post BMP Condition

Table 10 shows the various conservation practices (BMPs) by Conservation District that were implemented in the 339 WQMPs in the basin.

Major BMPs simulated with SWAT were:

- Waste utilization
- Nutrient and pest management
- Ponds
- Buffer practices – (field borders, filter strips, riparian forest buffers)
- Pasture and hayland planting
- Prescribed grazing
- Forage harvest management
- Heavy use area protection
- Waste storage facility
- Dead bird disposal methods – (incinerators, freezers, composters)
- Brush management
- Critical area planting
- Diversion
- Fencing

- Firebreaks
- Forest site preparation
- Forest stand improvement
- Tree/shrub establishment
- Watering facility
- Upland wildlife habitat management

These practices were applied only to the farms in the watershed that had implemented WQMPs under the §319(h) and SB503 programs. As a percentage of the total land area in the watershed these farms constituted a relatively small part – 17,297 ha (42,742 ac) about 1.9 percent.

BMP Analysis

Results are presented as a percentage reduction in nutrient and sediment loadings at three levels:

- Farm level – This included only the areas in each subbasin where BMPs were applied.
- Subbasin level – Included both the BMP areas and the non-BMP areas within the subbasin.
- Watershed level –Four locations were selected along the main channels. These were: (1) the outlet of subbasin 104 on the Angelina River; (2) the outlet of subbasin 107 on the Attoyac River; (3) the outlet of subbasin 109 on Loco Bayou; and (4) the outlet of subbasin 111 on the Angelina River at the outlet for the entire watershed. Refer to the subbasin map in Figure 1 for subbasin locations.

Results and Discussion

The simulation of the watershed hydrology can be separated into two major divisions. The first part is the land phase of the hydrologic cycle that controls the amount of water, sediment, and nutrient loadings to the main channel in each subbasin. The second part is the routing phase, or water phase, of the hydrologic cycle where water, sediment, and nutrients move through the channel network of the watershed to the outlet.

The following results described under the farm and subbasin levels are from the land phase, while the watershed results are from the routing phase of the simulation.

Reductions at farm level

The subbasins containing §319(h) and SB503-funded conservation practices are shown in Figures 7, while the types of installed practices and extents are listed in Table 10. The reductions in nutrient loadings are shown in Figure 31 and 32. Sediment reduction loadings

are shown in Figure 33. These include only the areas where conservation practices were implemented.

Reductions at the farm level

Phosphorous reductions varied from 34 to 91 percent at the farm level across the subbasins.

Nitrogen reductions varied from 16 to 87 percent.

Sediment reductions varied from 42 to 78 percent at the farm level.

Reductions at the subbasin level - Phosphorous

Reductions in subbasin phosphorous loadings are shown in Figure 34. Here all the land in the subbasin is considered.

The percentage reductions varied from 0 to 33 percent. Compared to the reductions at the farm level, for each subbasin the percentage reductions are less, as expected, as the BMP treated land comprises a relatively small part of the total subbasin.

Reductions at the subbasin level – Nitrogen

Reductions in subbasin nitrogen loadings are shown in Figure 35.

The percentage reductions varied from 0 to 21 percent.

Reductions at the subbasin level – sediment

Reductions in subbasin sediment loadings are shown in Figure 36.

The percentage reductions varied from less than 0 to 29 percent. Subbasins that show little reduction in sediment have BMP practices, such as farm ponds that impact limited areas.

Reductions at the watershed level – Phosphorous

Figure 37 shows the percentage phosphorous loading reductions at four locations on the main channels. See the subbasin map in Figure 1 for the location of the subbasins.

The percentage reductions varied from 0.6 in subbasin 104 to 11.5 in subbasin 107. The percentage reduction at the watershed outlet in subbasin 111 was 6.6.

Reductions at the watershed level – Nitrogen

Figure 37 shows the percentage nitrogen loading reductions at the same four locations on the main channels.

The percentage reductions varied from 0.1 in subbasin 104 to 4.5 in subbasin 109. The percentage reduction at the watershed outlet in subbasin 111 was 0.3.

Reductions at the watershed level – sediment

Figure 37 shows the percentage sediment loading reductions at the same four locations.

The percentage reductions varied from 0.04 at the outlet of subbasin 104 to 2.6 at the outlet of subbasin 109. At the watershed outlet in subbasin 111, the percentage reduction was 0.2.

Spatial view of nutrient and sediment loadings

Symbolized subbasin maps in Figures 38 and 39 present the predicted average annual phosphorous loadings by subbasin for the current condition and scenario II, 1976 through 2005.

Similar maps in Figures 40 and 41 present the predicted average annual nitrogen loadings by subbasin for the current conditions and scenario II, 1976 through 2005.

Lastly, predicted sediment loadings are shown in Figures 42 and 43 for both scenarios.

Conclusions

The purpose of this study was to simulate the nutrient and sediment loadings for two scenarios: (I) current conditions prior to the development and application of WQMPs, (II) §319(h) and SB503 BMP applications through 339 WQMPs. The study was performed using the SWAT basin scale model.

Scenario II showed that BMPs at the farm level where they were implemented reduced phosphorous loadings from 34 to 91 percent. Nitrogen loadings were reduced from 16 to 87 percent and sediment loadings from 42 to 78 percent.

Scenario II showed that BMPs at the subbasin level reduced phosphorous loadings from 0 to 33 percent, and reduced sediment loadings from less than 0 to 29 percent.

Scenario II showed that BMPs at the watershed level at the outlet of the Sam Rayburn Reservoir Watershed (subbasin 111), reduced phosphorous, nitrogen, and sediment loadings by 6.6, 0.3, and 0.2 percent, respectively.

Major BMPs simulated with SWAT were waste utilization, nutrient and pest management, ponds, buffer practices (field borders, filter strips, riparian forest buffers), pasture and hayland planting, prescribed grazing, forage harvest management, heavy use area protection, waste storage facility, brush management, critical area planting, fencing, forest site preparation, firebreaks, tree establishment, and upland wildlife habitat management.

Table 10. Locations and types of conservation practices (BMPs) implemented under the §319(h) and SB503 projects.

Conservation Practice	Nacogdoches SWCD 401	Smith Co. SWCD 426	Cherokee Co. SWCD 427	Pineywoods SWCD 429	Upper Neches SWCD 438	Rusk SWCD 447	Shelby SWCD 449	Grand Total
313 - Waste Storage Facility (no)	22	1	2	10	2	4	7	48
314 - Brush Management (ha)	16	0	5	0	0	70	0	90
316 - Animal Mortality Facility (no)	161	0	3	39	6	19	48	276
317 - Composting Facility (no)	63	0	0	14	1	1	12	91
327 - Conservation Cover (ha)	13	0	0	0	0	0	8	22
329 - Residue Management (ha)	2	0	0	0	0	0	0	2
338 - Prescribed Burning (ha)	0	0	0	0	0	73	0	73
342 - Critical Area Planting (ha)	2	0	1	0	0	0	0	3
362 - Diversion (m)	0	0	0	0	0	761	0	761
378 - Pond (no)	0	0	0	0	0	2	0	2
382 - Fencing (m)	2,012	0	5,373	2,185	1,472	6,513	838	18,394
386 - Field Border (m)	17,732	0	0	3,762	0	0	5,346	26,839
391 - Riparian Forest Buffer (ha)	67	0	13	117	0	25	25	246
393 - Filter strip (m)	240	0	61	132	23	94	47	596
394 - Firebreak (m)	0	0	0	0	0	15,194	0	15,194
460 - Land Clearing (ha)	62	0	21	0	0	0	5	88
472 - Use Exclusion (ha)	0	1	0	0	0	0	0	1
490 - Forest Site Preparation (ha)	19	0	0	0	0	103	6	128
511 - Forage Harvest Mgt. (ha)	1,986	0	725	730	110	556	442	4,550
512 - Pasture & Hay Planting (ha)	142	0	529	43	0	114	34	862
528 - Prescribed Grazing (ha)	3,150	27	849	1,240	110	976	872	7,224
561 - Heavy Use Area Prot. (ha)	978	1	49	287	50	138	310	1,814
562 - Recreation Area Imp. (ha)	8	0	0	0	0	1,012	0	1,019
574 - Spring Development (no)	1	0	0	0	0	0	0	1
590 - Nutrient Management (ha)	4,147	27	839	1,930	117	962	1,143	9,165

(table continued on next page)

Table 10 – continued.

Conservation Practice	Nacogdoches SWCD 401	Smith Co. SWCD 426	Cherokee Co. SWCD 427	Pineywoods SWCD 429	Upper Neches SWCD 438	Rusk SWCD 447	Shelby SWCD 449	Grand Total
595 - Pest Management (ha)	5,271	28	898	2,122	171	1,307	1,513	11,310
612 - Tree/Shrub Establishment (ha)	19	0	0	0	0	103	17	139
614 - Watering Facility (no)	1	0	1	0	0	1	0	3
633 - Waste Utilization (ha)	3,912	25	682	1,877	89	904	1,120	8,609
634 - Manure Transfer (no)	0	1	2	0	0	0	0	3
644 - Wetland Wildlife Hab. Mgt. (ha)	0	0	0	57	0	0	0	57
645 - Upland Wildlife Hab. Mgt. (ha)	609	2	267	208	37	274	832	2,230
648 - Wildlife Watering facility (no)	0	0	0	0	0	0	1	1
666 - Forest Stand Improvement (ha)	1,105	0	12	761	31	223	76	2,208
Freezer Unit (no)	40	0	4	9	4	1	15	73
Incinerator (no)	84	0	1	24	1	18	23	151
Waste Dist. System - Pipe (m)	0	0	61	0	0	0	0	61
Waste Dist. System - Sprinkler (no)	0	0	2	0	0	0	0	2

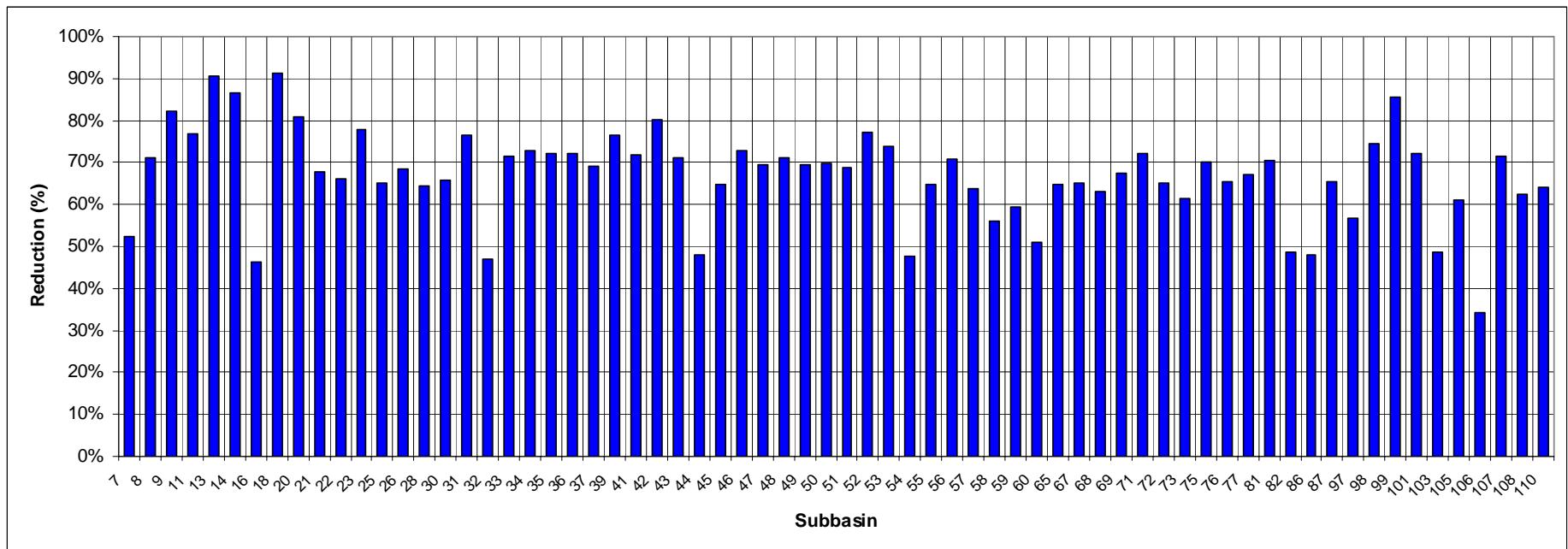


Figure 31. Percentage reductions in total phosphorous at the farm level where conservation practices were implemented. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

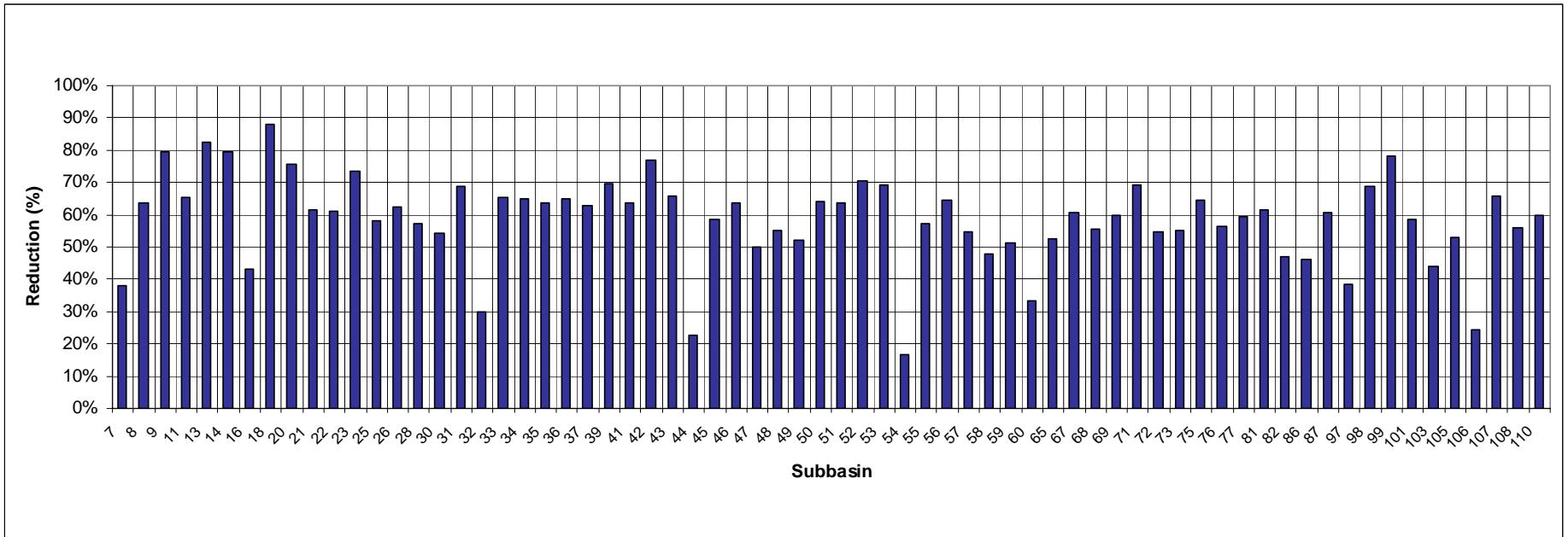


Figure 32. Percentage reductions in total nitrogen loading at the farm level where conservation practices were implemented. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

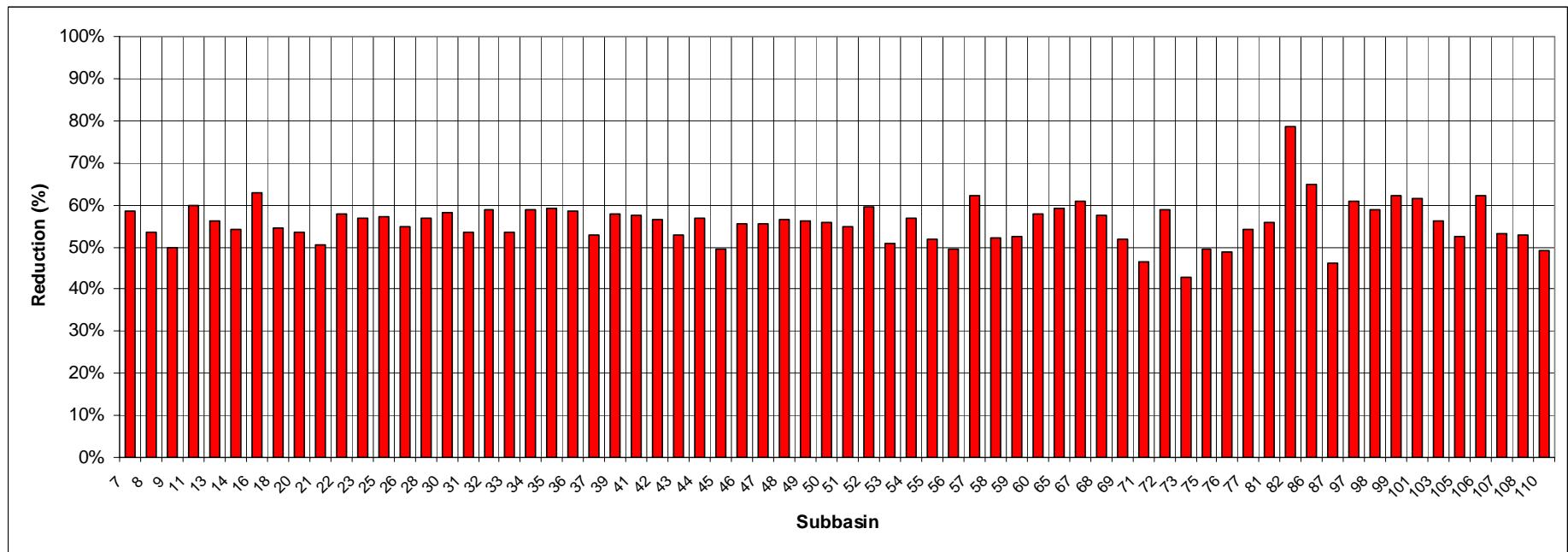


Figure 33. Percentage reductions in the sediment loadings at the farm level where conservation practices were implemented. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

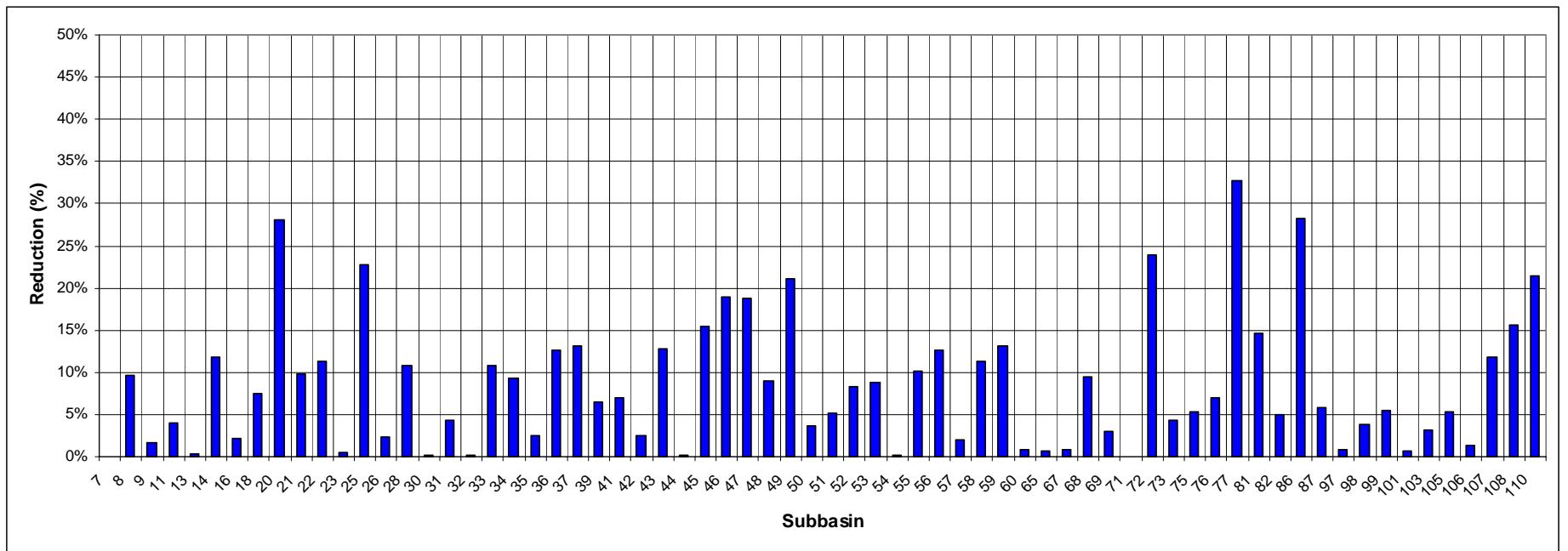
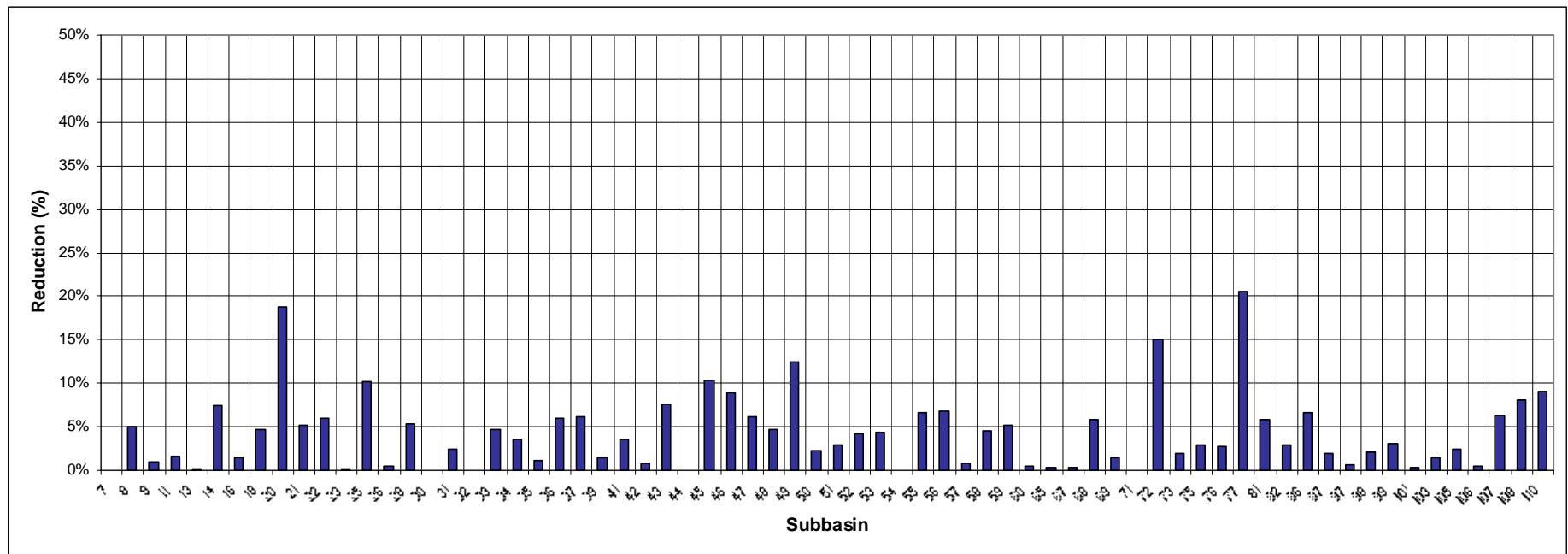
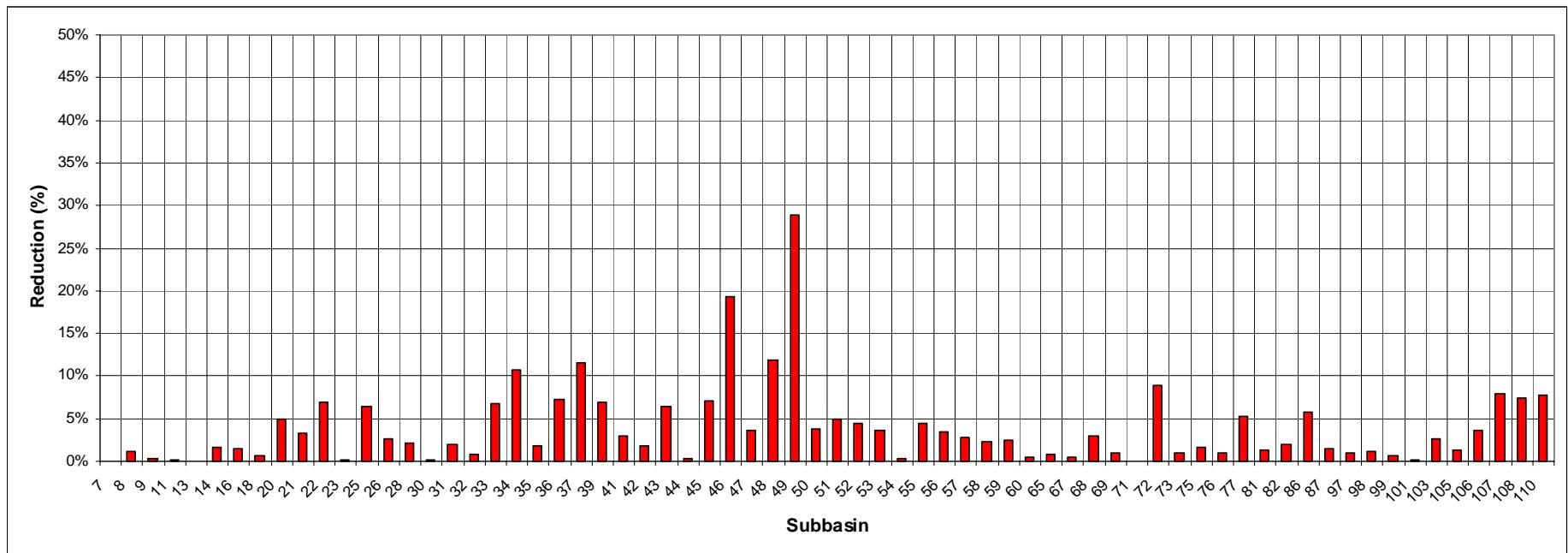


Figure 34. Percentage reductions in total phosphorous loadings at the subbasin level. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.





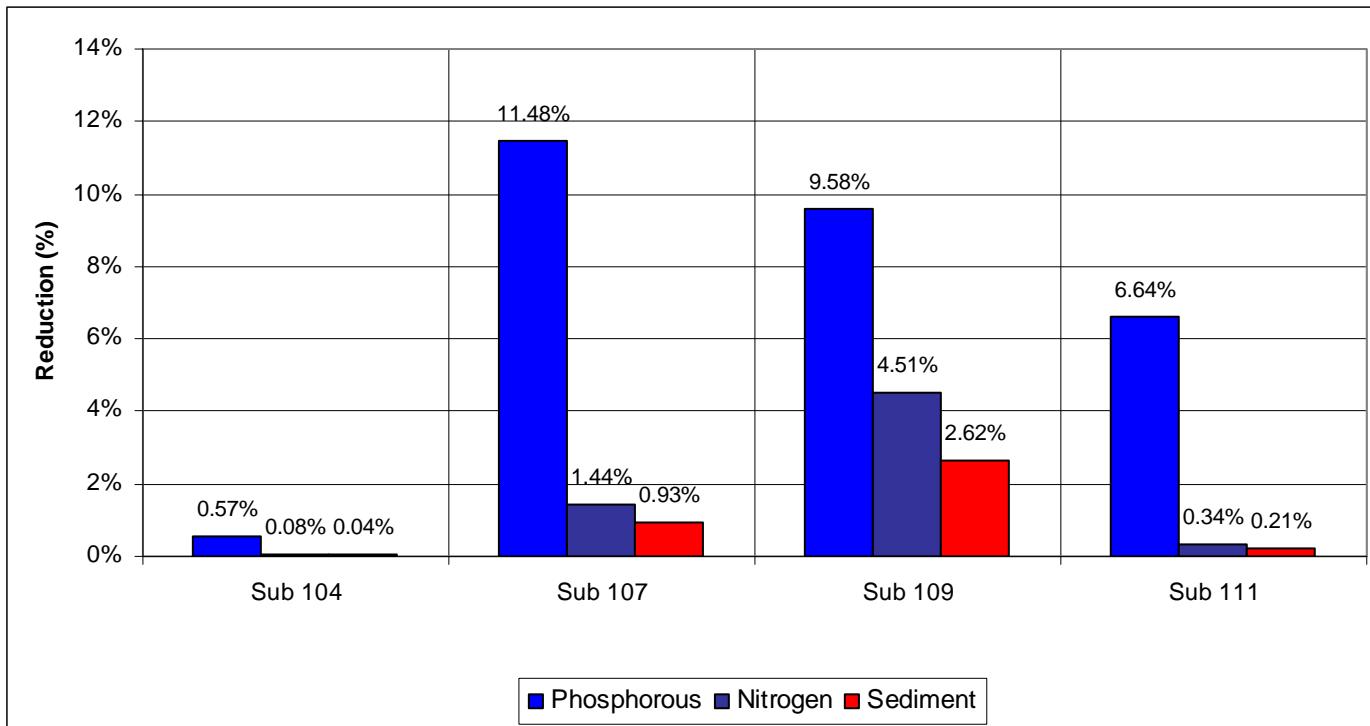


Figure 37. Percentage reductions in phosphorous, nitrogen and sediment loadings at four locations on the main channels, Sam Rayburn Watershed. Subbasin 111 is the outlet for the watershed.

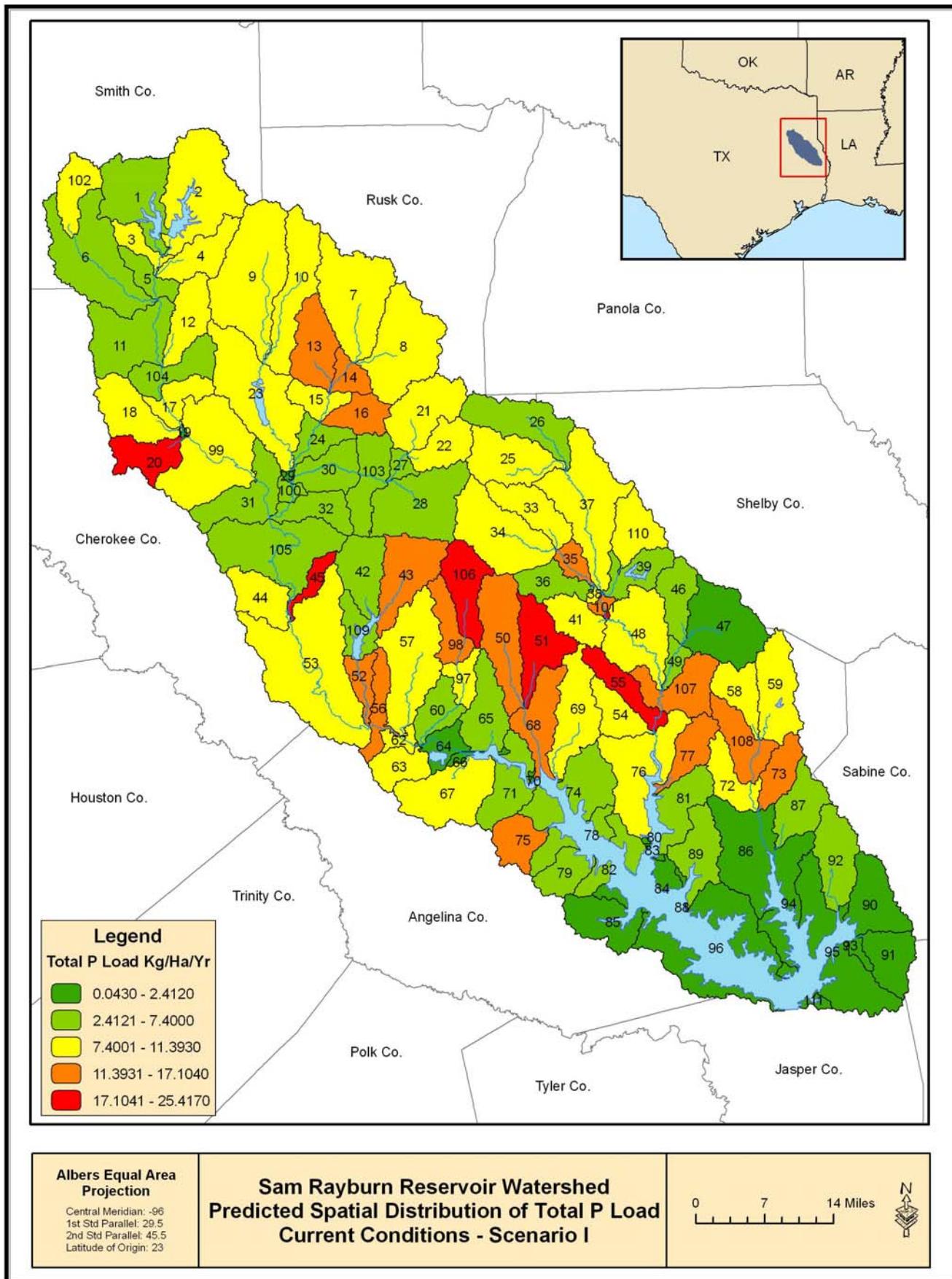


Figure 38. Predicted spatial distribution of total phosphorous load by subbasin for current condition, Sam Rayburn watershed, 1976 through 2005.

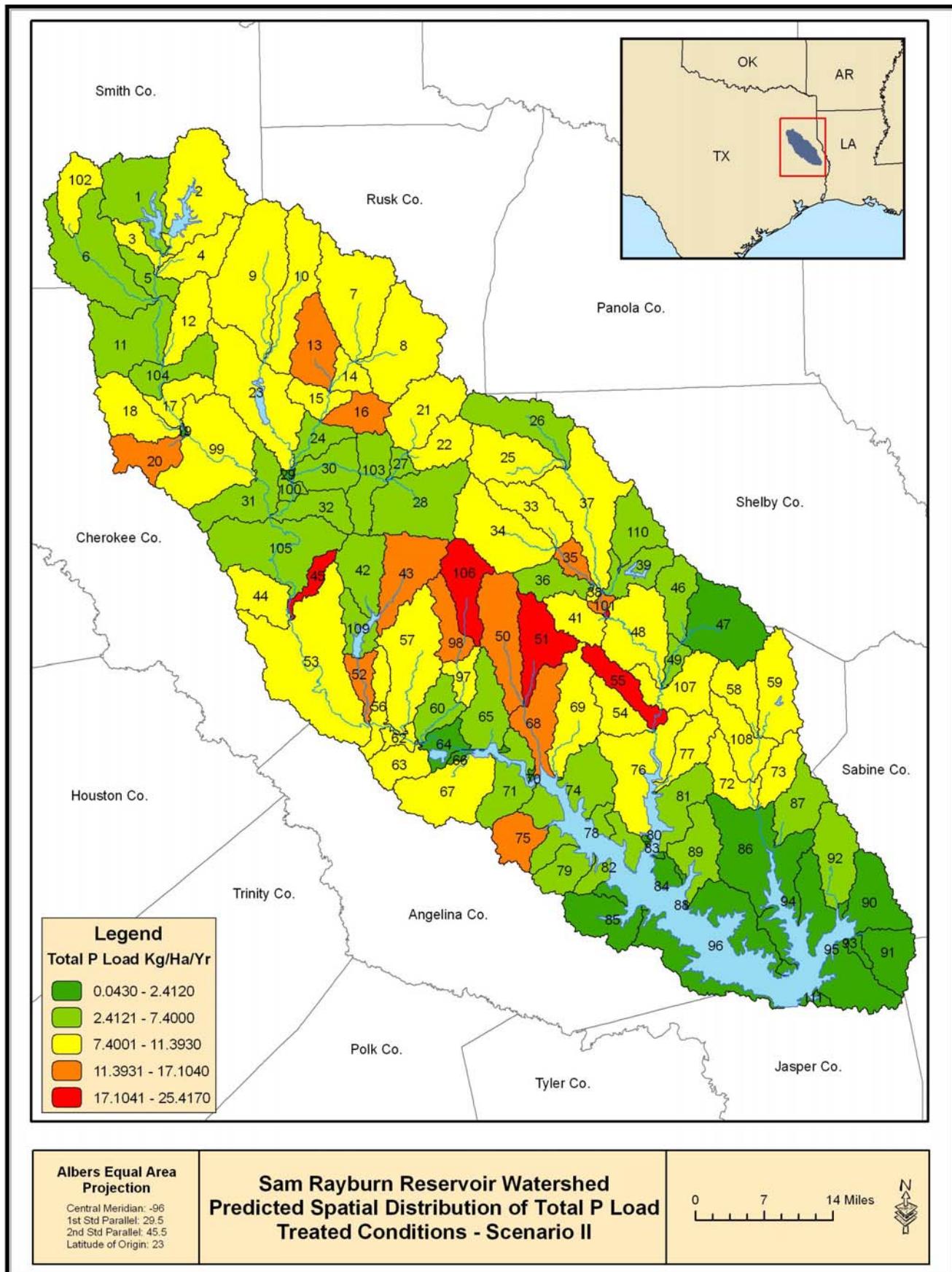


Figure 39. Predicted spatial distribution of total phosphorous by subbasin after conservation practice implementation (scenario II), Sam Rayburn watershed, 1976 through 2005.

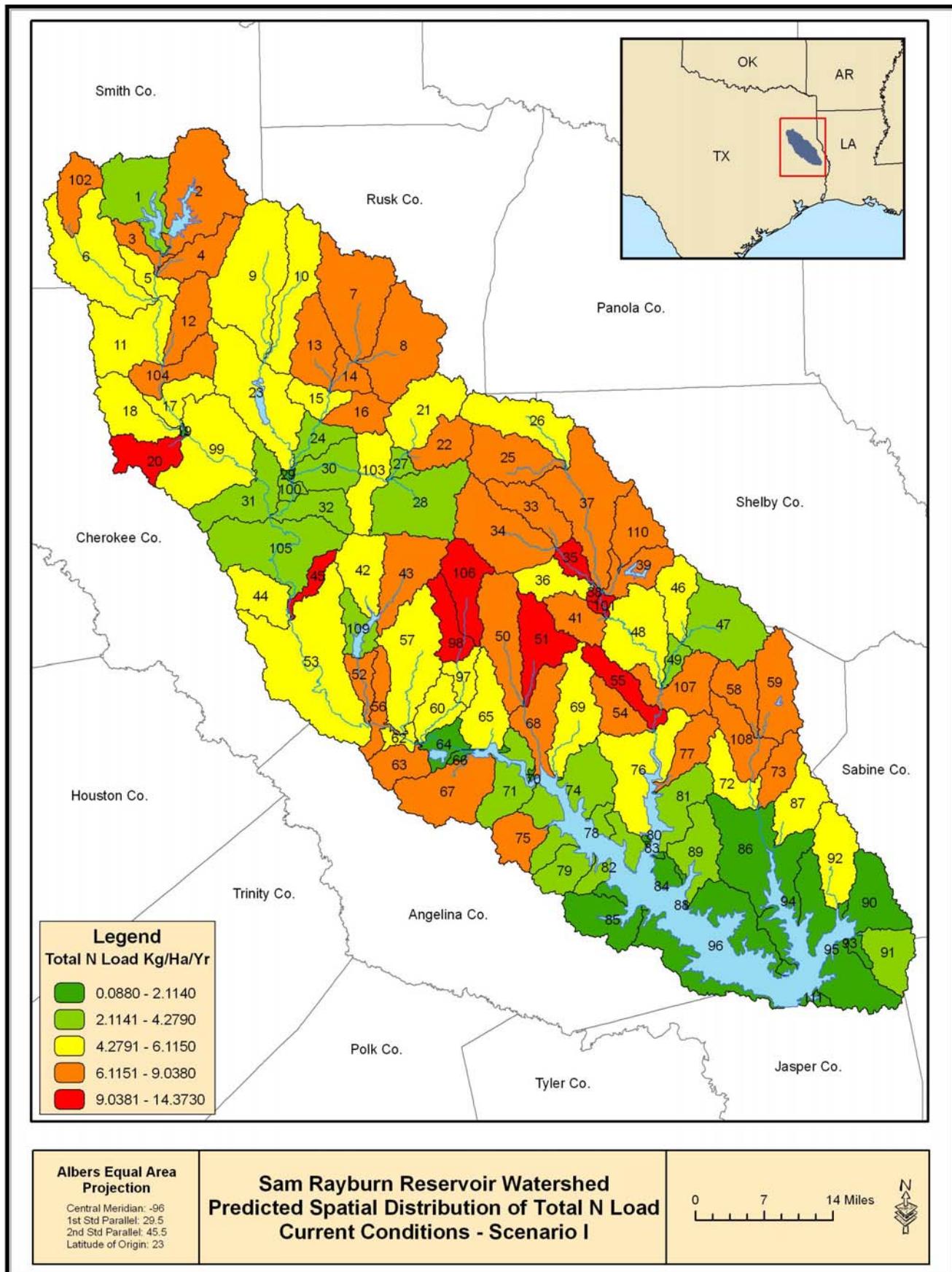


Figure 40. Predicted spatial distribution of total nitrogen load by subbasin for current condition, Sam Rayburn watershed, 1976 through 2005.

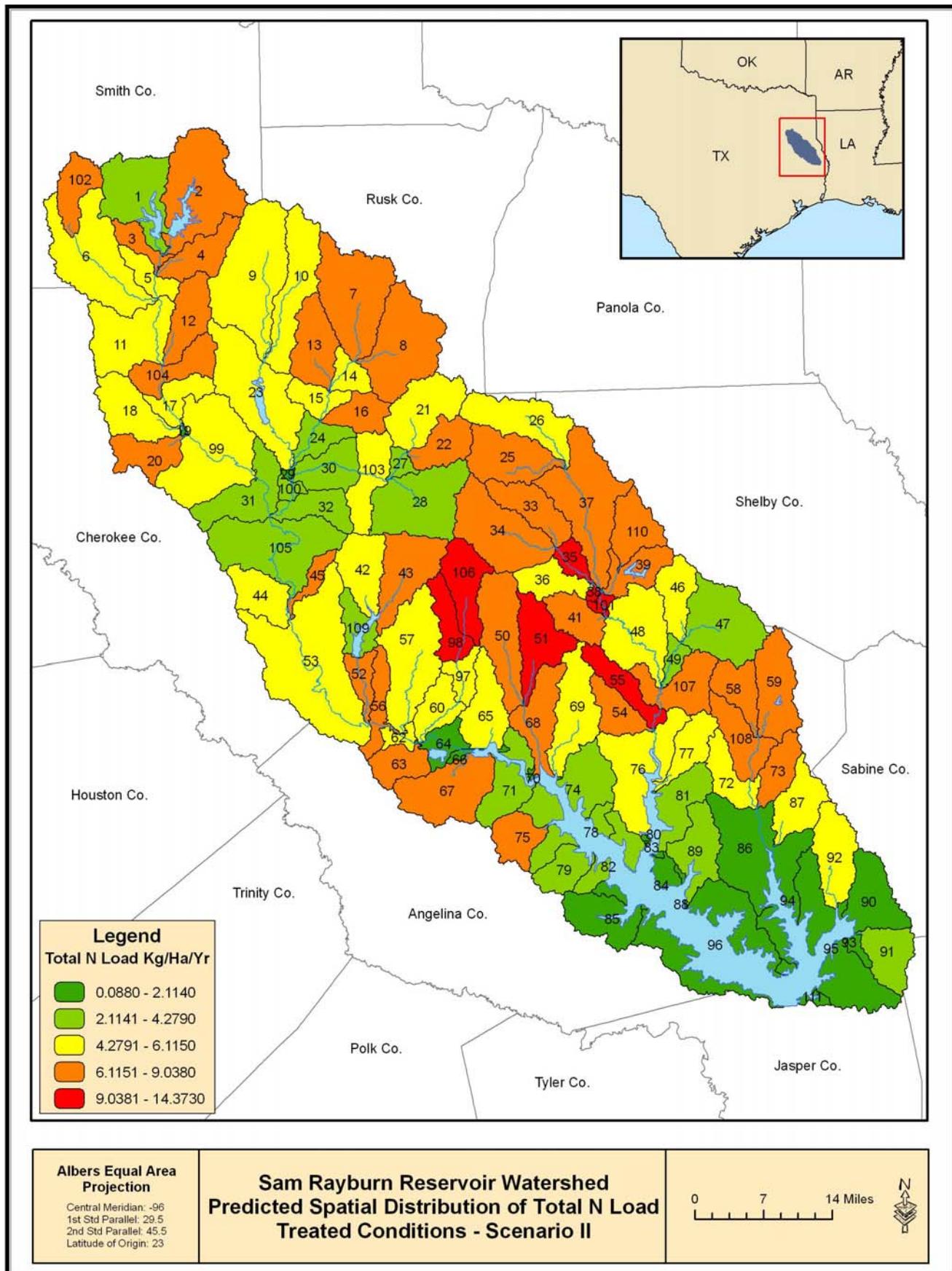


Figure 41. Predicted spatial distribution of total nitrogen by subbasin after conservation practice implementation (scenario II), Sam Rayburn watershed, 1976 through 2005.

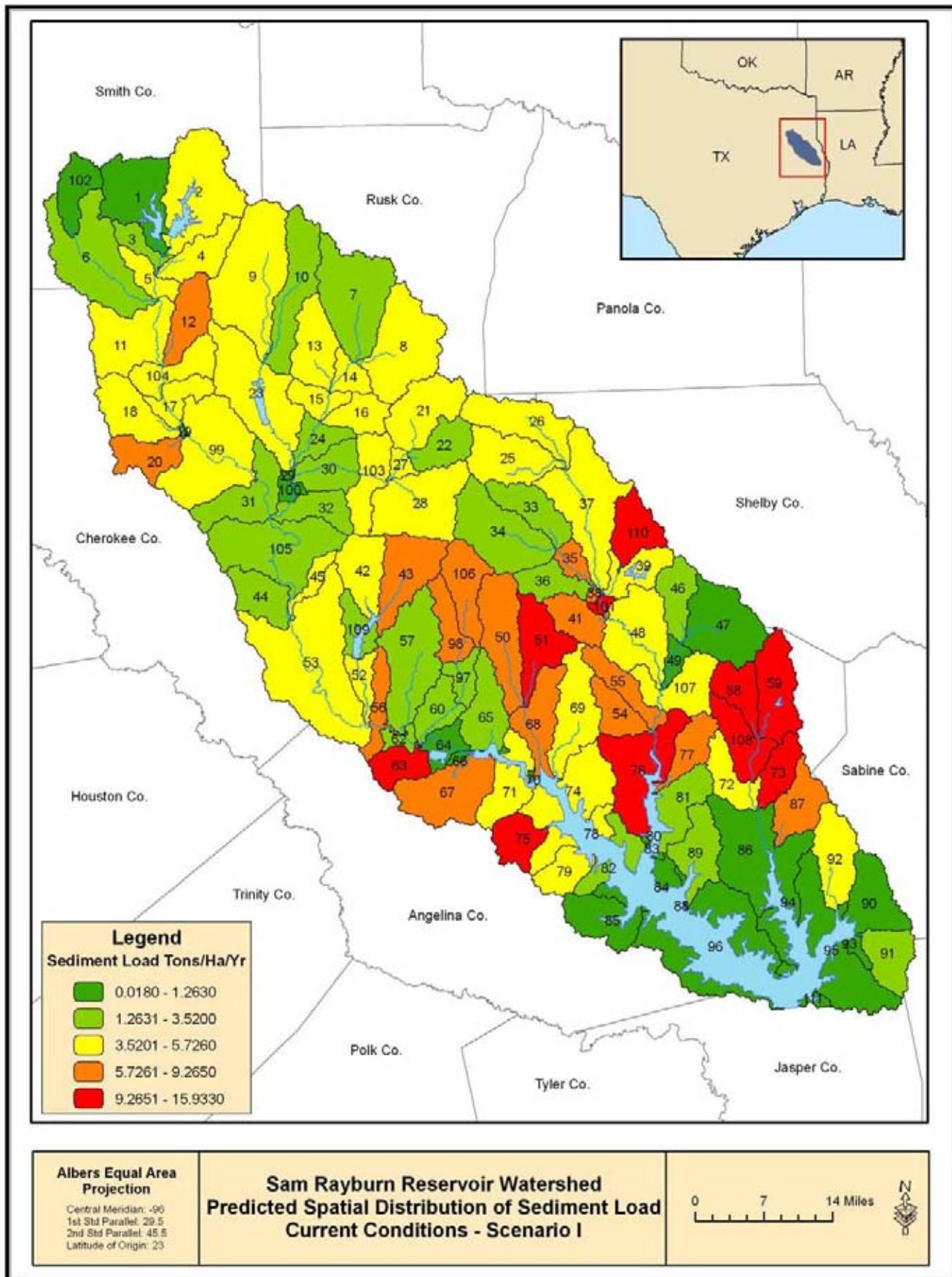


Figure 42. Predicted spatial distribution of sediment load by subbasin for current condition, Sam Rayburn watershed, 1976 through 2005.

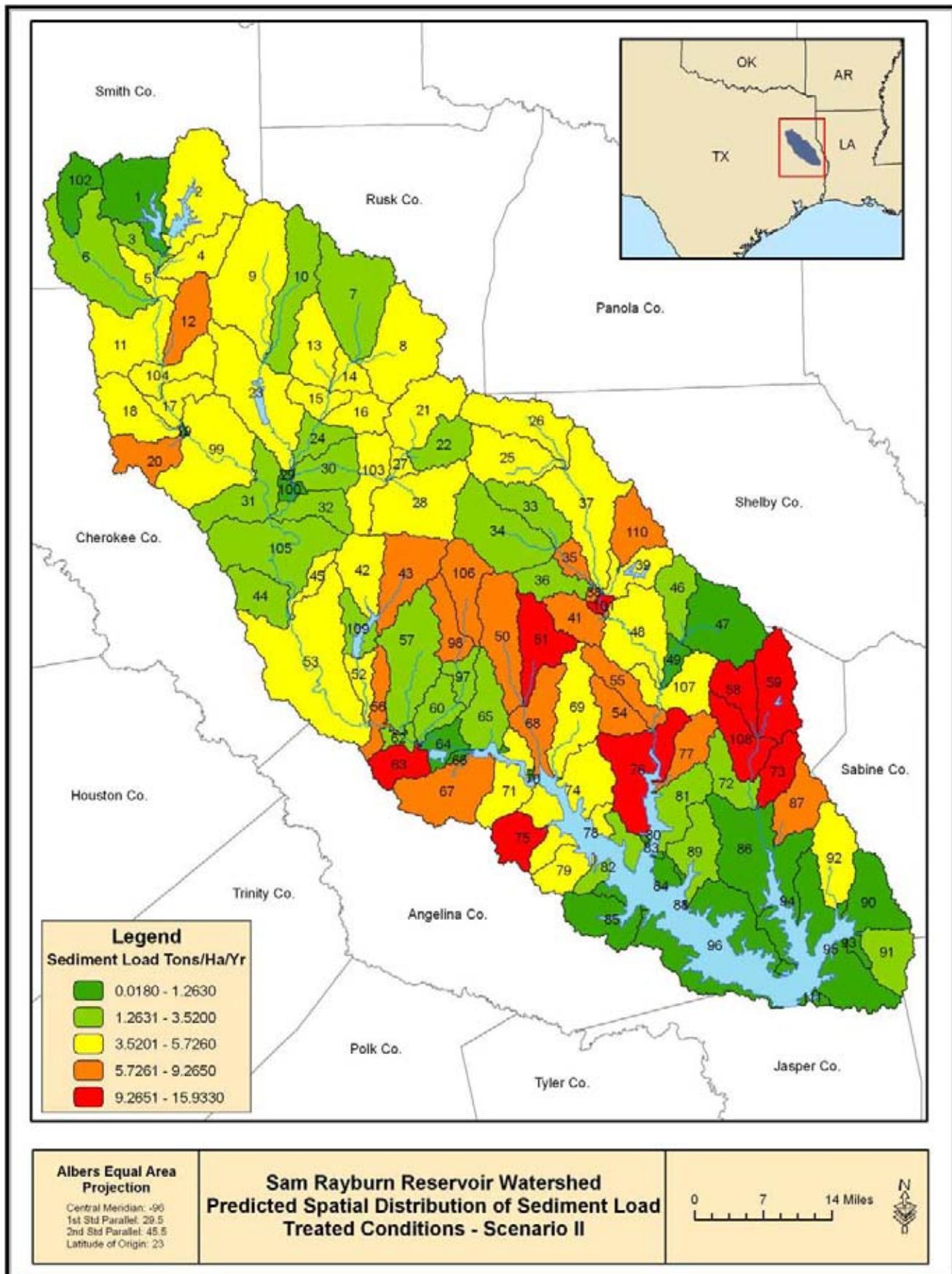


Figure 43. Predicted spatial distribution of sediment load by subbasin after conservation practice implementation (scenario II), Sam Rayburn watershed, 1976 through 2005.

APPENDIX

Notes for Table 11 – Appendix

In Table 11, the fraction of landuse in each subbasin is based on actual input into SWAT and will not agree exactly with landuse percentages in Table 2. We set the landuse filter in SWAT at 7 percent, which means that any landuse comprising less than 7 percent of a subbasin was ignored in the model input. In addition, SWAT re-allocates areas to the other landuses when a landuse of less than 7 percent is ignored and dropped out of the model. The result is usually a small adjustment in area for each category of landuse in SWAT input.

Table 11. Land use/Cover by Subbasin, Sam Rayburn Reservoir Watershed

Detailed LANDUSE/SOIL distribution SWAT model class Tue May 01 14:01:51 2007

		Area [ha]	Area [acres]	
Watershed		894179.9450	2209563.3531	
LANDUSE		Area [ha]	Area [acres]	%Wat.Area
	Residential-High Density --> URHD	1406.8366	3476.3635	0.16
SR319 - Poultry Headquarters --> TBHQ	1740.2553	4300.2578	0.19	
Range-Brush --> RNGB	75523.9797	186623.5299	8.45	
Pasture --> PAST	179004.3515	442328.7027	20.02	
TPLH, SR319 Pastureland --> TPLH	391.7498	968.0333	0.04	
Range-Grasses --> RNGE	1420.6374	3510.4659	0.16	
Water --> WATR	41530.9716	102625.1075	4.64	
Wetlands-Forested --> WETF	141962.4741	350796.3715	15.88	
TPLL --> TPLL	27.8286	68.7658	0.00	
SR319 Pasture, no litter --> TBPA	1730.1761	4275.3515	0.19	
Wetlands-Mixed --> WETL	9896.5514	24454.8732	1.11	
TPMH, SR319 Pasture --> TPMH	1620.0966	4003.3396	0.18	
TPML, SR319 Pasture --> TPML	172.8839	427.2047	0.02	
TPMM, SR319 Pasture --> TPMM	445.3072	1100.3763	0.05	
TPSS, SR319 Pasture --> TPSS	406.0985	1003.4898	0.05	
TPMV, SR319 Pasture --> TPMV	1357.8454	3355.3038	0.15	
TPHH, SR319 Pasture --> TPHH	1227.0119	3032.0079	0.14	
Forest-Deciduous --> FRSD	53621.7429	132502.0078	6.00	
Forest-Evergreen --> FRSE	229173.9194	566300.2135	25.63	
TPHL, SR319 Pasture --> TPHL	202.8734	501.3102	0.02	
TPHM, SR319 Pasture --> TPHM	478.5159	1182.4367	0.05	
TPHV, SR319 Pasture --> TPHV	239.0056	590.5949	0.03	
Forest-Mixed --> FRST	85868.9387	212186.4410	9.60	
TPVH, SR319 Pasture --> TPVH	999.2833	2469.2789	0.11	
Residential-Low Density --> URLD	56373.3115	139301.2714	6.30	
TPVL, SR319 Pasture --> TPVL	218.8447	540.7761	0.02	
TPVM, SR319 Pasture --> TPVM	349.4628	863.5400	0.04	
Agricultural Land-Row Crops --> AGR	3142.4231	7765.0847	0.35	
TPVV, SR319 Pasture --> TPVV	182.9553	452.0916	0.02	
Residential-Medium Density --> URMD	3261.6810	8059.7768	0.36	

Table 11-1

SR 319 Hayland - no litter --> TBHA 201.9323 498.9848 0.02

SOIL

BONWIER	46.0111	113.6957	0.01
GRAPELAND	402.0794	993.5583	0.04
HERTY	999.2888	2469.2925	0.11
DUMPS	45.1415	111.5468	0.01
BETIS	13080.9875	32323.7741	1.46
Redsprings	20304.3063	50172.9561	2.27
BOWIE	36616.7129	90481.7285	4.10
KEITHVILLE	1599.0273	3951.2765	0.18
RAYBURN	2585.2462	6388.2725	0.29
STRINGTOWN	170.3676	420.9867	0.02
MABEN	8843.5169	21852.7723	0.99
NEWCO	28.3024	69.9365	0.00
BROWNDELL	416.1567	1028.3439	0.05
DREKA	1503.6891	3715.6910	0.17
ANGELINA	867.7865	2144.3438	0.10
AUSTONIO	87.7595	216.8580	0.01
TENAHA	30749.5634	75983.7086	3.44
DIBOLL	438.8447	1084.4072	0.05
MOSWELL	4128.2141	10201.0235	0.46
NIKFUL	169.7100	419.3619	0.02
LILBERT	44651.9067	110337.0940	4.99
LEAGUEVILLE	274.3523	677.9382	0.03
EASTWOOD	5394.3023	13329.5906	0.60
WOODTELL	16854.4332	41648.1471	1.88
DERLY	704.6248	1741.1631	0.08
NACOGDOCHES	34475.7632	85191.3346	3.86
PICKTON	3026.3001	7478.1388	0.34
URLAND	8.6172	21.2935	0.00
KURTH	3002.4518	7419.2086	0.34
Mattex	2237.0942	5527.9716	0.25
METCALF	3419.7352	8450.3367	0.38
NACLINA	836.3527	2066.6692	0.09
HAINESVILLE	5.5344	13.6759	0.00
GUYTON	0.7115	1.7582	0.00
GALLIME	3009.3298	7436.2044	0.34
SACUL	117797.9073	291084.5188	13.17
Bub	4327.9845	10694.6660	0.48
RUSTON	3624.7405	8956.9151	0.41
DAM	9.0156	22.2779	0.00
FULLER	4882.9698	12066.0624	0.55

Table11-2

MISCELLANEOUS	23.9779	59.2505	0.00
Bienville	2979.6728	7362.9205	0.33
CORRIGAN	848.8394	2097.5247	0.09
RAYLAKE	777.4453	1921.1061	0.09
IUKA	15609.4190	38571.6547	1.75
BRILEY	5319.4234	13144.5612	0.59
DOUCETTE	30.9903	76.5786	0.00
KOURY	3673.7183	9077.9415	0.41
Ochlockonee	356.9623	882.0716	0.04
DAMS	24.8286	61.3527	0.00
ROSENWALL	4588.5336	11338.4959	0.51
Naconiche	456.9580	1129.1660	0.05
WATER	45852.5011	113303.8229	5.13
MOTEN	50.0430	123.6588	0.01
PITS	273.7420	676.4303	0.03
DARCO	36958.3512	91325.9337	4.13
FREESTONE	383.9217	948.6897	0.04
OAKWOOD	2031.2343	5019.2814	0.23
TUSCOSO	7634.9571	18866.3607	0.85
ALAZAN	10591.6245	26172.4338	1.18
CHIRENO	422.5419	1044.1221	0.05
METH	993.2947	2454.4808	0.11
OWENTOWN	1799.3487	4446.2805	0.20
LANDFILL	32.1241	79.3804	0.00
OSIER	1307.1208	3229.9609	0.15
LACERDA	4116.0197	10170.8904	0.46
KELTYS	3128.8934	7731.6521	0.35
WOLFPEN	5863.0413	14487.8682	0.66
ETOILE	2371.6100	5860.3668	0.27
Iulus	2063.5404	5099.1116	0.23
HANNAHATCHEE	8850.7182	21870.5673	0.99
RAINO	195.3689	482.7664	0.02
Elrose	8946.8910	22108.2150	1.00
BERNALDO	28918.8661	71459.9641	3.23
BESNER	53.0495	131.0880	0.01
WODEN	1588.1862	3924.4874	0.18
MARIETTA	17139.0924	42351.5544	1.92
LETNEY	2700.9227	6674.1149	0.30
TONKAWA	6510.3483	16087.3962	0.73
CUTHBERT	86393.5191	213482.7054	9.66
LANEVILLE	17333.8126	42832.7176	1.94
KISATCHIE	2924.1500	7225.7209	0.33
ALTO	6656.5844	16448.7530	0.74

Table11-3

KULLIT	17926.4489	44297.1515	2.00
TAHOULA	535.5990	1323.4920	0.06
TRAWICK	20555.3895	50793.3951	2.30
RENTZEL	5087.4627	12571.3748	0.57
POPHERS	334.5687	826.7359	0.04
Ulto	4161.8717	10284.1930	0.47
PERCILLA	927.4838	2291.8588	0.10
Keechi	1274.6005	3149.6016	0.14
URBAN	375.6076	928.1451	0.04
MANTACHIE	42134.1141	104115.5028	4.71
Kawah	97.5596	241.0746	0.01
SAWTOWN	191.8805	474.1462	0.02
KIRVIN	37771.2269	93334.5902	4.22
MELHOMES	346.1900	855.4529	0.04
TEHRAN	4276.6339	10567.7761	0.48
ATTOYAC	9687.1600	23937.4568	1.08
LATEX	3459.5717	8548.7746	0.39
Sawlit	9518.1994	23519.9466	1.06
MOLLVILLE	15115.3498	37350.7852	1.69

SUBBASIN #	1	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		12661.1952	31286.4464	1.42	
LANDUSE:					
Residential-High Density --> URHD	116.7062	288.3868	0.01	0.92	
Range-Brush --> RNGB	1309.1490	3234.9726	0.15	10.34	
Pasture --> PAST	1785.6201	4412.3565	0.20	14.10	
Range-Grasses --> RNGE	4.9814	12.3092	0.00	0.04	
Water --> WATR	1103.8062	2727.5604	0.12	8.72	
Wetlands-Forested --> WETF	1455.1898	3595.8468	0.16	11.49	
Wetlands-Mixed --> WETL	1.5814	3.9077	0.00	0.01	
Forest-Deciduous --> FRSD	1952.9305	4825.7890	0.22	15.42	
Forest-Evergreen --> FRSE	1647.8815	4071.9976	0.18	13.02	
Forest-Mixed --> FRST	993.6628	2455.3905	0.11	7.85	
Residential-Low Density --> URLD	1962.1026	4848.4535	0.22	15.50	
Agricultural Land-Row Crops --> AGR	9.0930	22.4692	0.00	0.07	
Residential-Medium Density --> URMD	318.4908	787.0067	0.04	2.52	
SOIL:					
MANTACHIE	625.3584	1545.2919	0.07	4.94	

Table11-4

KEECHI	152.8408	377.6772	0.02	1.21
URBAN	53.8461	133.0565	0.01	0.43
DAMS	3.6372	8.9877	0.00	0.03
ATTOYAC	458.5224	1133.0317	0.05	3.62
DERLY	178.4592	440.9816	0.02	1.41
PICKTON	1157.3361	2859.8354	0.13	9.14
BERNALDO	121.2922	299.7190	0.01	0.96
BRILEY	114.5713	283.1114	0.01	0.90
OAKWOOD	112.9108	279.0083	0.01	0.89
PITS	30.5207	75.4182	0.00	0.24
LEAGUEVILLE	74.7995	184.8332	0.01	0.59
KULLIT	107.5341	265.7222	0.01	0.85
WATER	1167.3779	2884.6491	0.13	9.22
KIRVIN	169.7616	419.4894	0.02	1.34
SACUL	43.0927	106.4843	0.00	0.34
LILBERT	773.1388	1910.4646	0.09	6.11
WOLFPEN	1014.2999	2506.3857	0.11	8.01
FREESTONE	93.8552	231.9208	0.01	0.74
TENAHA	537.1172	1327.2434	0.06	4.24
ELROSE	413.2157	1021.0767	0.05	3.26
RAINO	43.5671	107.6566	0.00	0.34
CUTHBERT	1350.3440	3336.7677	0.15	10.67
BOWIE	737.0832	1821.3695	0.08	5.82
DARCO	1141.7595	2821.3447	0.13	9.02
ALTO	71.2414	176.0410	0.01	0.56
REDSPRINGS	1368.6090	3381.9014	0.15	10.81
OWENTOWN	159.4826	394.0895	0.02	1.26
TONKAWA	42.3020	104.5304	0.00	0.33
GALLIME	343.3185	848.3573	0.04	2.71

SUBBASIN #	2	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		18352.4208	45349.7494	2.05	
LANDUSE:					
Residential-High Density --> URHD		1.7393	4.2979	0.00	0.01
Range-Brush --> RNGB		1847.2196	4564.5719	0.21	10.07
Pasture --> PAST		6267.4227	15487.1148	0.70	34.15
Range-Grasses --> RNGE		3.8739	9.5726	0.00	0.02
Water --> WATR		1017.4136	2514.0798	0.11	5.54
Wetlands-Forested --> WETF		1882.2428	4651.1161	0.21	10.26
Wetlands-Mixed --> WETL		2.6090	6.4469	0.00	0.01

Table11-5

Forest-Deciduous --> FRSD	3366.7385	8319.3791	0.38	18.34
Forest-Evergreen --> FRSE	1884.2983	4656.1954	0.21	10.27
Forest-Mixed --> FRST	925.3096	2286.4862	0.10	5.04
Residential-Low Density --> URLD	988.7941	2443.3598	0.11	5.39
Agricultural Land-Row Crops --> AGR	155.3514	383.8812	0.02	0.85
Residential-Medium Density --> URMD	9.4081	23.2478	0.00	0.05

SOIL:

MANTACHIE	1265.7387	3127.7037	0.14	6.90
KEECHI	76.4503	188.9125	0.01	0.42
DAMS	3.2414	8.0097	0.00	0.02
DERLY	119.6957	295.7741	0.01	0.65
BERNALDO	176.6184	436.4329	0.02	0.96
BRILEY	57.7133	142.6123	0.01	0.31
LEAGUEVILLE	71.4696	176.6049	0.01	0.39
KULLIT	249.7482	617.1403	0.03	1.36
WATER	1027.7704	2539.6719	0.11	5.60
KIRVIN	1004.0526	2481.0641	0.11	5.47
SACUL	11.2264	27.7410	0.00	0.06
FREESTONE	3.2414	8.0097	0.00	0.02
LILBERT	5443.4671	13451.0793	0.61	29.66
TENAHA	807.9856	1996.5729	0.09	4.40
ELROSE	31.3075	77.3623	0.00	0.17
CUTHBERT	3183.7163	7867.1222	0.36	17.35
DARCO	1028.6400	2541.8209	0.12	5.60
BOWIE	3168.8532	7830.3946	0.35	17.27
REDSPRINGS	10.4358	25.7874	0.00	0.06
OWENTOWN	143.9669	355.7494	0.02	0.78
TONKAWA	2.7671	6.8376	0.00	0.02
GALLIME	464.3150	1147.3456	0.05	2.53

SUBBASIN #	3	Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
		2983.4482	7372.2497	0.33		

LANDUSE:

Residential-High Density --> URHD	13.3620	33.0182	0.00	0.45
Range-Brush --> RNGB	235.2191	581.2382	0.03	7.88
Pasture --> PAST	781.4809	1931.0785	0.09	26.19
Range-Grasses --> RNGE	3.0045	7.4242	0.00	0.10
Water --> WATR	14.5480	35.9489	0.00	0.49
Wetlands-Forested --> WETF	531.3976	1313.1099	0.06	17.81

Table11-6

Wetlands-Mixed --> WETL	0.3953	0.9769	0.00	0.01
Forest-Deciduous --> FRSD	266.1336	657.6295	0.03	8.92
Forest-Evergreen --> FRSE	194.1843	479.8390	0.02	6.51
Forest-Mixed --> FRST	201.6955	498.3996	0.02	6.76
Residential-Low Density --> URLD	671.4221	1659.1176	0.08	22.50
Agricultural Land-Row Crops --> AGRR	19.2919	47.6713	0.00	0.65
Residential-Medium Density --> URMD	51.3133	126.7978	0.01	1.72

SOIL:

MANTACHIE	391.6893	967.8837	0.04	13.13
ATTOYAC	64.5172	159.4253	0.01	2.16
DERLY	82.1488	202.9938	0.01	2.75
PICKTON	64.2800	158.8392	0.01	2.15
BERNALDO	24.9056	61.5429	0.00	0.83
BRILEY	15.8921	39.2702	0.00	0.53
OAKWOOD	9.0925	22.4680	0.00	0.30
LEAGUEVILLE	2.3720	5.8612	0.00	0.08
KULLIT	39.9280	98.6640	0.00	1.34
WATER	28.9379	71.5070	0.00	0.97
KIRVIN	149.9077	370.4295	0.02	5.02
SACUL	0.1581	0.3907	0.00	0.01
WOLFPEN	42.8534	105.8928	0.00	1.44
FREESTONE	1.5813	3.9075	0.00	0.05
LILBERT	166.8277	412.2395	0.02	5.59
TENAHA	71.8703	177.5951	0.01	2.41
ELROSE	247.4742	611.5212	0.03	8.29
RAINO	52.9737	130.9007	0.01	1.78
CUTHBERT	554.3265	1369.7684	0.06	18.58
BOWIE	394.5356	974.9172	0.04	13.22
DARCO	73.0563	180.5258	0.01	2.45
ALTO	4.7439	11.7225	0.00	0.16
REDSPRINGS	325.8279	805.1370	0.04	10.92
OWENTOWN	53.5272	132.2683	0.01	1.79
GALLIME	120.0211	296.5780	0.01	4.02

SUBBASIN #	4	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		6759.8368	16703.8947	0.76	
LANDUSE:					
Residential-High Density --> URHD	14.7065	36.3404	0.00	0.22	
Range-Brush --> RNGB	1049.2987	2592.8696	0.12	15.52	

Table11-7

Pasture --> PAST	2060.0918	5090.5898	0.23	30.48
Range-Grasses --> RNGE	1.3441	3.3214	0.00	0.02
Water --> WATR	13.2042	32.6282	0.00	0.20
Wetlands-Forested --> WETF	618.3043	1527.8608	0.07	9.15
Forest-Deciduous --> FRSD	600.1189	1482.9237	0.07	8.88
Forest-Evergreen --> FRSE	1119.6684	2766.7566	0.13	16.56
Forest-Mixed --> FRST	727.0215	1796.5064	0.08	10.76
Residential-Low Density --> URLD	514.2520	1270.7425	0.06	7.61
Agricultural Land-Row Crops --> AGR	17.6320	43.5694	0.00	0.26
Residential-Medium Density --> URMD	24.1945	59.7859	0.00	0.36

SOIL:

MANTACHIE	493.4574	1219.3579	0.06	7.30
KEECHI	3.9534	9.7689	0.00	0.06
ATTOYAC	39.2963	97.1032	0.00	0.58
DERLY	25.6968	63.4980	0.00	0.38
BERNALDO	42.6171	105.3091	0.00	0.63
BRILEY	16.6831	41.2249	0.00	0.25
PITS	2.3720	5.8614	0.00	0.04
LEAGUEVILLE	33.4454	82.6452	0.00	0.49
KULLIT	105.7126	261.2212	0.01	1.56
WATER	4.4278	10.9412	0.00	0.07
KIRVIN	1336.9446	3303.6570	0.15	19.78
SACUL	75.4300	186.3912	0.01	1.12
LILBERT	559.7947	1383.2806	0.06	8.28
RAINO	3.7162	9.1828	0.00	0.05
TENAHA	85.7087	211.7904	0.01	1.27
ELROSE	14.8646	36.7312	0.00	0.22
CUTHBERT	1558.0161	3849.9356	0.17	23.05
DARCO	41.4311	102.3784	0.00	0.61
BOWIE	1925.2825	4757.4693	0.22	28.48
OWENTOWN	317.5332	784.6405	0.04	4.70
GALLIME	73.4533	181.5067	0.01	1.09

SUBBASIN #	5	Area [ha]	Area [acres]		%Wat.Area	%Sub.Area
			9410.5679	0.43		
LANDUSE:						
Range-Brush --> RNGB		456.4774	1127.9784	0.05	11.99	
Pasture --> PAST		1285.3649	3176.2010	0.14	33.75	

Table11-8

Range-Grasses --> RNGE	0.6327	1.5634	0.00	0.02
Water --> WATR	51.3260	126.8292	0.01	1.35
Wetlands-Forested --> WETF	518.4007	1280.9941	0.06	13.61
Wetlands-Mixed --> WETL	0.7908	1.9542	0.00	0.02
Forest-Deciduous --> FRSD	324.4849	801.8183	0.04	8.52
Forest-Evergreen --> FRSE	540.9399	1336.6895	0.06	14.20
Forest-Mixed --> FRST	366.8743	906.5647	0.04	9.63
Residential-Low Density --> URLD	229.4249	566.9205	0.03	6.02
Agricultural Land-Row Crops --> AGR	33.2156	82.0774	0.00	0.87
Residential-Medium Density --> URMD	0.3954	0.9771	0.00	0.01

SOIL:

MANTACHIE	390.3625	964.6052	0.04	10.25
Ruston	15.7379	38.8891	0.00	0.41
Marietta	1.1863	2.9313	0.00	0.03
DERLY	0.1582	0.3908	0.00	0.00
PICKTON	4.1915	10.3574	0.00	0.11
Alazan	12.5745	31.0722	0.00	0.33
BERNALDO	8.5412	21.1056	0.00	0.22
OAKWOOD	3.4797	8.5986	0.00	0.09
BRILEY	22.9346	56.6725	0.00	0.60
LEAGUEVILLE	4.5869	11.3345	0.00	0.12
Percilla	10.1229	25.0141	0.00	0.27
KULLIT	2.3725	5.8627	0.00	0.06
WATER	67.9338	167.8679	0.01	1.78
KIRVIN	203.4061	502.6265	0.02	5.34
FREESTONE	3.0843	7.6215	0.00	0.08
LILBERT	342.8325	847.1563	0.04	9.00
Sacul	440.9767	1089.6756	0.05	11.58
TENAHA	215.9805	533.6987	0.02	5.67
ELROSE	52.8286	130.5422	0.01	1.39
RAINO	13.0490	32.2447	0.00	0.34
CUTHBERT	710.4977	1755.6753	0.08	18.66
DARCO	92.0547	227.4717	0.01	2.42
BOWIE	789.0289	1949.7297	0.09	20.72
Iuka	137.2121	339.0579	0.02	3.60
Bienville	7.3549	18.1743	0.00	0.19
REDSPRINGS	73.7861	182.3291	0.01	1.94
OWENTOWN	70.3064	173.7306	0.01	1.85
GALLIME	111.7468	276.1319	0.01	2.93

Area [ha]

Area [acres] %Wat.Area %Sub.Area

Table11-9

SUBBASIN #	6	18260.0032	45121.3809	2.04
LANDUSE:				
Residential-High Density --> URHD	21.1884	52.3577	0.00	0.12
Range-Brush --> RRGB	2053.1435	5073.4203	0.23	11.24
Pasture --> PAST	5636.9933	13929.2922	0.63	30.87
Range-Grasses --> RNGE	4.0321	9.9636	0.00	0.02
Water --> WATR	98.5895	243.6195	0.01	0.54
Wetlands-Forested --> WETF	2258.8611	5581.7586	0.25	12.37
Wetlands-Mixed --> WETL	2.5300	6.2517	0.00	0.01
Forest-Deciduous --> FRSD	1741.0094	4302.1213	0.19	9.53
Forest-Evergreen --> FRSE	1770.3411	4374.6015	0.20	9.70
Forest-Mixed --> FRST	1885.3754	4658.8568	0.21	10.33
Residential-Low Density --> URLD	2504.2674	6188.1700	0.28	13.71
Agricultural Land-Row Crops --> AGRR	179.5483	443.6727	0.02	0.98
Residential-Medium Density --> URMD	104.1238	257.2950	0.01	0.57
SOIL:				
MANTACHIE	1420.4157	3509.9183	0.16	7.78
KEECHI	253.6287	626.7293	0.03	1.39
Ruston	24.2718	59.9769	0.00	0.13
ATTOYAC	62.3003	153.9472	0.01	0.34
DERLY	51.3108	126.7915	0.01	0.28
Alazan	83.9631	207.4771	0.01	0.46
PICKTON	910.7864	2250.5988	0.10	4.99
BERNALDO	17.2354	42.5895	0.00	0.09
Woodtell	13.9939	34.5795	0.00	0.08
BRILEY	239.7139	592.3451	0.03	1.31
OAKWOOD	1514.8940	3743.3789	0.17	8.30
LEAGUEVILLE	87.6790	216.6592	0.01	0.48
Percilla	21.1884	52.3577	0.00	0.12
KIRVIN	524.5719	1296.2433	0.06	2.87
Water	86.5721	213.9241	0.01	0.47
Lilbert	910.9446	2250.9896	0.10	4.99
Sacul	277.9796	686.9015	0.03	1.52
WOLFPEN	3178.5024	7854.2383	0.36	17.41
FREESTONE	98.2732	242.8381	0.01	0.54
RAINO	34.0754	84.2021	0.00	0.19
ELROSE	1034.3593	2555.9535	0.12	5.66
Tenaha	515.6379	1274.1672	0.06	2.82
CUTHBERT	2223.5997	5494.6261	0.25	12.18
Darco	604.3448	1493.3661	0.07	3.31

Table11-10

Bowie	479.0326	1183.7134	0.05	2.62
Nacogdoches	168.1634	415.5403	0.02	0.92
Angelina	20.5559	50.7948	0.00	0.11
ALTO	199.1555	492.1231	0.02	1.09
Iuka	351.1113	867.6137	0.04	1.92
Bienville	10.6733	26.3742	0.00	0.06
Hannahatchee	16.4448	40.6358	0.00	0.09
REDSPRINGS	1758.4029	4345.1015	0.20	9.63
Bub	70.4436	174.0698	0.01	0.39
OWENTOWN	200.8158	496.2258	0.02	1.10
GALLIME	622.2126	1537.5185	0.07	3.41
Trawick	114.6389	283.2785	0.01	0.63
Betis	58.1101	143.5929	0.01	0.32

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	7	16993.3536	41991.4264	1.90	

LANDUSE:

Residential-High Density --> URHD	145.3065	359.0597	0.02	0.86
Range-Brush --> RNGB	1422.4703	3514.9952	0.16	8.37
SR319 - Poultry Headquarters --> TBHQ	0.8696	2.1489	0.00	0.01
Pasture --> PAST	5479.4318	13539.9499	0.61	32.24
Range-Grasses --> RNGE	1.0277	2.5396	0.00	0.01
Water --> WATR	91.8641	227.0007	0.01	0.54
Wetlands-Forested --> WETF	1480.1027	3657.4079	0.17	8.71
SR319 Pasture, no litter --> TBPA	0.4743	1.1721	0.00	0.00
Wetlands-Mixed --> WETL	4.6644	11.5259	0.00	0.03
Forest-Deciduous --> FRSD	1248.7033	3085.6083	0.14	7.35
Forest-Evergreen --> FRSE	2514.4829	6213.4129	0.28	14.80
Forest-Mixed --> FRST	1884.8739	4657.6177	0.21	11.09
Residential-Low Density --> URLD	2328.3830	5753.5508	0.26	13.70
Agricultural Land-Row Crops --> AGRR	96.3703	238.1359	0.01	0.57
Residential-Medium Density --> URMD	294.3287	727.3010	0.03	1.73

SOIL:

Keechi	102.9320	254.3502	0.01	0.61
Laneville	1176.5244	2907.2505	0.13	6.92
Rentzel	265.6311	656.3877	0.03	1.56
Derly	3.8738	9.5723	0.00	0.02
Woodtell	591.4245	1461.4394	0.07	3.48
Bernaldo	177.8780	439.5453	0.02	1.05

Table11-11

Kawah	17.8669	44.1499	0.00	0.11
Pits	18.7365	46.2988	0.00	0.11
Sawlit	673.4064	1664.0210	0.08	3.96
Naconiche	197.4050	487.7976	0.02	1.16
Water	99.1373	244.9733	0.01	0.58
Kirvin	2190.2706	5412.2682	0.24	12.89
Sacul	188.6297	466.1134	0.02	1.11
Lilbert	1973.8129	4877.3904	0.22	11.62
Ulto	3.7947	9.3770	0.00	0.02
Cuthbert	1224.1957	3025.0487	0.14	7.20
Tenaha	1959.3455	4841.6407	0.22	11.53
Mollville	3.6366	8.9863	0.00	0.02
Mattex	348.7989	861.8996	0.04	2.05
Latex	334.1734	825.7592	0.04	1.97
Darco	1478.0473	3652.3287	0.17	8.70
Bowie	1252.8933	3095.9620	0.14	7.37
Woden	12.2538	30.2798	0.00	0.07
Bienville	6.4827	16.0190	0.00	0.04
Redsprings	72.0999	178.1624	0.01	0.42
Maben	1044.5784	2581.2056	0.12	6.15
Meth	137.7171	340.3058	0.02	0.81
Gallime	113.4466	280.3322	0.01	0.67
Betis	1114.0694	2752.9213	0.12	6.56
Iulus	210.2913	519.6403	0.02	1.24

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	8	16098.4304	39780.0264	1.80	
LANDUSE:					
SR319 - Poultry Headquarters	Residential-High Density --> URHD	0.4743	1.1721	0.00	0.00
	Range-Brush --> RNGB	1574.0224	3889.4880	0.18	9.78
	Pasture --> PAST	0.2372	0.5861	0.00	0.00
	Range-Grasses --> RNGE	4015.2196	9921.8084	0.45	24.94
	TPLH, SR319 Pastureland --> TPLH	1.5021	3.7117	0.00	0.01
	Water --> WATR	25.8516	63.8806	0.00	0.16
	Wetlands-Forested --> WETF	93.2081	230.3218	0.01	0.58
SR319 Pasture, no litter	Pasture --> TBPA	1056.0417	2609.5319	0.12	6.56
	TPMH, SR319 Pasture --> TPMH	6.4827	16.0190	0.00	0.04
	TPMV, SR319 Pasture --> TPMV	125.3051	309.6353	0.01	0.78
	Forest-Deciduous --> FRSD	27.2746	67.3970	0.00	0.17
		2112.2416	5219.4545	0.24	13.12

Table11-12

Forest-Evergreen --> FRSE	2980.6023	7365.2173	0.33	18.51
Forest-Mixed --> FRST	3278.0142	8100.1371	0.37	20.36
Residential-Low Density --> URLD	775.5479	1916.4177	0.09	4.82
Agricultural Land-Row Crops --> AGR	15.1789	37.5079	0.00	0.09
Residential-Medium Density --> URMD	11.2261	27.7402	0.00	0.07

SOIL:

Laneville	1719.0127	4247.7663	0.19	10.68
Attoyac	28.4605	70.3273	0.00	0.18
Rentzel	47.3551	117.0167	0.01	0.29
Derly	4.1110	10.1584	0.00	0.03
Dreka	80.4008	198.6745	0.01	0.50
Woodtell	1216.7644	3006.6856	0.14	7.56
Bernaldo	56.2094	138.8963	0.01	0.35
Kawah	7.1151	17.5818	0.00	0.04
Pits	1.5811	3.9071	0.00	0.01
Sawlit	1298.7463	3209.2671	0.15	8.07
Naconiche	28.3024	69.9365	0.00	0.18
Water	67.9889	168.0040	0.01	0.42
Kirvin	548.9709	1356.5346	0.06	3.41
Sacul	33.2039	82.0485	0.00	0.21
Lilbert	1490.8545	3683.9761	0.17	9.26
Ulto	68.1470	168.3947	0.01	0.42
Cuthbert	167.3634	413.5633	0.02	1.04
Tenaha	2234.9378	5522.6432	0.25	13.88
Mattex	2.8460	7.0327	0.00	0.02
Latex	657.5951	1624.9503	0.07	4.08
Darco	1599.7159	3952.9779	0.18	9.94
Bowie	243.4161	601.4934	0.03	1.51
Woden	6.0083	14.8469	0.00	0.04
Bienville	15.6533	38.6800	0.00	0.10
Maben	2693.7839	6656.4748	0.30	16.73
Redsprings	431.6505	1066.6301	0.05	2.68
Meth	193.5312	478.2253	0.02	1.20
Gallime	32.4133	80.0949	0.00	0.20
Betis	1079.2054	2666.7705	0.12	6.70
Iulus	43.0860	106.4677	0.00	0.27

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	9	21413.8192	52914.6179	2.39	

Table11-13

LANDUSE:

Residential-High Density --> URHD	1.9766	4.8842	0.00	0.01
Range-Brush --> RNGB	2812.5665	6949.9925	0.31	13.13
Pasture --> PAST	6763.4738	16712.8818	0.76	31.58
Range-Grasses --> RNGE	9.9619	24.6163	0.00	0.05
Water --> WATR	110.6083	273.3187	0.01	0.52
Wetlands-Forested --> WETF	2370.2123	5856.9131	0.27	11.07
Wetlands-Mixed --> WETL	9.4084	23.2487	0.00	0.04
TPMM, SR319 Pasture --> TPMM	28.9368	71.5044	0.00	0.14
Forest-Deciduous --> FRSD	2065.3476	5103.5772	0.23	9.64
Forest-Evergreen --> FRSE	3258.3204	8051.4727	0.36	15.22
Forest-Mixed --> FRST	2240.3127	5535.9248	0.25	10.46
Residential-Low Density --> URLD	1269.3471	3136.6203	0.14	5.93
Agricultural Land-Row Crops --> AGRR	458.8783	1133.9112	0.05	2.14
Residential-Medium Density --> URMD	14.4684	35.7522	0.00	0.07

SOIL:

Ochlockonee	8.3806	20.7089	0.00	0.04
Mantachie	1152.8882	2848.8444	0.13	5.38
KEECHI	208.9620	516.3555	0.02	0.98
Laneville	175.5186	433.7152	0.02	0.82
Ruston	124.8396	308.4848	0.01	0.58
Rentzel	26.0115	64.2758	0.00	0.12
Attoyac	1.1859	2.9305	0.00	0.01
Marietta	25.8534	63.8851	0.00	0.12
Dreka	569.2494	1406.6438	0.06	2.66
DERLY	86.9687	214.9039	0.01	0.41
Alazan	221.0585	546.2467	0.02	1.03
BERNALDO	105.2321	260.0337	0.01	0.49
Woodtell	176.7045	436.6457	0.02	0.83
Briley	373.9652	924.0868	0.04	1.75
PITS	2.4509	6.0564	0.00	0.01
Sawlit	363.2918	897.7122	0.04	1.70
Percilla	24.5093	60.5638	0.00	0.11
KULLIT	178.0486	439.9669	0.02	0.83
Water	48.5443	119.9555	0.01	0.23
KIRVIN	2274.8630	5621.3002	0.25	10.62
LILBERT	2034.2761	5026.7979	0.23	9.50
Sacul	1831.7181	4526.2671	0.20	8.55
Cuthbert	3142.1777	7764.4783	0.35	14.67
TENAHA	1282.5506	3169.2466	0.14	5.99
Latex	10.3572	25.5931	0.00	0.05

Table11-14

Matte	347.1631	857.8573	0.04	1.62
Mollville	50.3628	124.4489	0.01	0.24
DARCO	1057.0646	2612.0594	0.12	4.94
BOWIE	2920.4077	7216.4733	0.33	13.64
Nacogdoches	3.5578	8.7915	0.00	0.02
Woden	97.4840	240.8877	0.01	0.46
Angelina	138.6755	342.6741	0.02	0.65
Iuka	386.2990	954.5641	0.04	1.80
Bienville	512.2454	1265.7840	0.06	2.39
GALLIME	280.4344	692.9674	0.03	1.31
OWENTOWN	74.2396	183.4498	0.01	0.35
Trawick	10.9897	27.1560	0.00	0.05
Iulus	314.2731	776.5846	0.04	1.47
Betis	771.0167	1905.2209	0.09	3.60

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	10	12402.2048	30646.4682	1.39	

LANDUSE:

Residential-High Density --> URHD	1.5816	3.9083	0.00	0.01
Range-Brush --> RNGB	1815.0012	4484.9586	0.20	14.63
Pasture --> PAST	2834.6790	7004.6334	0.32	22.86
Range-Grasses --> RNGE	5.6148	13.8744	0.00	0.05
Water --> WATR	57.8877	143.0434	0.01	0.47
Wetlands-Forested --> WETF	1391.4403	3438.3185	0.16	11.22
Wetlands-Mixed --> WETL	0.4745	1.1725	0.00	0.00
Forest-Deciduous --> FRSD	1262.8536	3120.5745	0.14	10.18
Forest-Evergreen --> FRSE	2450.5798	6055.5051	0.27	19.76
Forest-Mixed --> FRST	1393.1801	3442.6176	0.16	11.23
Residential-Low Density --> URLD	1103.6624	2727.2050	0.12	8.90
Agricultural Land-Row Crops --> AGR	77.0255	190.3337	0.01	0.62
Residential-Medium Density --> URMD	8.2245	20.3231	0.00	0.07

SOIL:

Mantachie	2.3724	5.8624	0.00	0.02
Keechi	310.7115	767.7836	0.03	2.51
Laneville	999.3538	2469.4533	0.11	8.06
Attoyac	14.5510	35.9563	0.00	0.12
Rentzel	109.2907	270.0629	0.01	0.88
Dreka	70.9362	175.2868	0.01	0.57
Derly	25.0689	61.9464	0.00	0.20

Table11-15

Woodtell	44.2066	109.2367	0.00	0.36
Bernaldo	219.0560	541.2982	0.02	1.77
Sawlit	1122.4048	2773.5183	0.13	9.05
Water	51.4030	127.0194	0.01	0.41
Kirvin	2198.4677	5432.5236	0.25	17.73
Sacul	306.5202	757.4267	0.03	2.47
Lilbert	884.2901	2185.1252	0.10	7.13
Ulto	68.4846	169.2290	0.01	0.55
Cuthbert	2099.5367	5188.0601	0.23	16.93
Tenaha	781.9586	1932.2588	0.09	6.30
Mattex	58.9949	145.7792	0.01	0.48
Latex	61.5255	152.0325	0.01	0.50
Mollville	24.6735	60.9693	0.00	0.20
Darco	275.9947	681.9967	0.03	2.23
Bowie	570.0200	1408.5479	0.06	4.60
Woden	72.2806	178.6089	0.01	0.58
Hannahatchee	53.3801	131.9048	0.01	0.43
Bienville	178.9616	442.2231	0.02	1.44
Redsprings	919.1651	2271.3030	0.10	7.41
Gallime	334.7523	827.1897	0.04	2.70
Owentown	34.4796	85.2007	0.00	0.28
Betis	123.8417	306.0191	0.01	1.00
Iulus	385.5227	952.6458	0.04	3.11

SUBBASIN #	11	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	11	12881.8432	31831.6786	1.44	
LANDUSE:					
Residential-High Density --> URHD		1.5023	3.7122	0.00	0.01
Range-Brush --> RNGB		1725.8759	4264.7256	0.19	13.40
SR319 - Poultry Headquarters --> TBHQ		3.8743	9.5736	0.00	0.03
Pasture --> PAST		3418.9389	8448.3690	0.38	26.54
Range-Grasses --> RNGE		11.4647	28.3299	0.00	0.09
Water --> WATR		42.3009	104.5276	0.00	0.33
Wetlands-Forested --> WETF		1961.3376	4846.5632	0.22	15.23
SR319 Pasture, no litter --> TBPA		8.6183	21.2963	0.00	0.07
Wetlands-Mixed --> WETL		3.1627	7.8151	0.00	0.02
Forest-Deciduous --> FRSD		1940.2267	4794.3971	0.22	15.06
Forest-Evergreen --> FRSE		1362.8790	3367.7421	0.15	10.58
TPHL, SR319 Pasture --> TPHL		56.3748	139.3050	0.01	0.44
Forest-Mixed --> FRST		1393.0035	3442.1814	0.16	10.81

Table11-16

Residential-Low Density --> URLD	755.5649	1867.0385	0.08	5.87
Agricultural Land-Row Crops --> AGRR	175.2126	432.9591	0.02	1.36
Residential-Medium Density --> URMD	21.5062	53.1430	0.00	0.17

SOIL:

Ochlockonee	66.1791	163.5319	0.01	0.51
Mantachie	999.6449	2470.1725	0.11	7.76
Ruston	212.5323	525.1779	0.02	1.65
Marietta	10.2787	25.3992	0.00	0.08
Alazan	87.8435	217.0657	0.01	0.68
Woodtell	54.1609	133.8344	0.01	0.42
Briley	132.9908	328.6269	0.01	1.03
Percilla	50.6820	125.2377	0.01	0.39
Water	14.5483	35.9497	0.00	0.11
LaCerda	3.9534	9.7689	0.00	0.03
Sacul	1935.0873	4781.6975	0.22	15.02
Lilbert	1782.6460	4405.0074	0.20	13.84
Elrose	171.5755	423.9717	0.02	1.33
Cuthbert	1242.6970	3070.7665	0.14	9.65
Tenaha	597.9842	1477.6489	0.07	4.64
Bowie	1127.6545	2786.4906	0.13	8.75
Darco	1844.6346	4558.1843	0.21	14.32
Nacogdoches	158.2132	390.9527	0.02	1.23
Angelina	77.5648	191.6665	0.01	0.60
Iuka	1063.0567	2626.8662	0.12	8.25
Bienville	215.0624	531.4300	0.02	1.67
Hannahatchee	180.5892	446.2449	0.02	1.40
Bub	497.4109	1229.1272	0.06	3.86
Trawick	286.6972	708.4430	0.03	2.23
Betis	68.1558	168.4164	0.01	0.53

SUBBASIN #	12	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
		7203.8200	17800.9994	0.81	

LANDUSE:

Residential-High Density --> URHD	10.3564	25.5913	0.00	0.14
Range-Brush --> RNGB	957.6949	2366.5120	0.11	13.29
Pasture --> PAST	2522.3885	6232.9480	0.28	35.01
Range-Grasses --> RNGE	2.6089	6.4467	0.00	0.04
Water --> WATR	14.3093	35.3590	0.00	0.20
Wetlands-Forested --> WETF	436.3939	1078.3512	0.05	6.06

Table11-17

Forest-Deciduous --> FRSD	562.0943	1388.9632	0.06	7.80
Forest-Evergreen --> FRSE	1090.5104	2694.7058	0.12	15.14
Forest-Mixed --> FRST	786.0624	1942.3996	0.09	10.91
Residential-Low Density --> URLD	651.2705	1609.3219	0.07	9.04
Agricultural Land-Row Crops --> AGRR	152.7379	377.4229	0.02	2.12
Residential-Medium Density --> URMD	17.3925	42.9778	0.00	0.24

SOIL:

MANTACHIE	104.8294	259.0387	0.01	1.46
KEECHI	22.1359	54.6990	0.00	0.31
Ruston	38.9750	96.3093	0.00	0.54
DAMS	0.4743	1.1721	0.00	0.01
Attoyac	32.8877	81.2670	0.00	0.46
Marietta	276.9362	684.3232	0.03	3.84
Alazan	109.4147	270.3692	0.01	1.52
Woodtell	138.5867	342.4546	0.02	1.92
Briley	29.4882	72.8668	0.00	0.41
Percilla	10.5936	26.1774	0.00	0.15
WATER	6.0874	15.0422	0.00	0.08
KIRVIN	254.3259	628.4521	0.03	3.53
LILBERT	186.6533	461.2296	0.02	2.59
Sacul	2781.8531	6874.0981	0.31	38.62
Elrose	0.6325	1.5628	0.00	0.01
CUTHBERT	150.3662	371.5623	0.02	2.09
Tenaha	7.9847	19.7307	0.00	0.11
Darco	84.4327	208.6375	0.01	1.17
BOWIE	2131.6894	5267.5111	0.24	29.59
Bienville	25.7725	63.6852	0.00	0.36
Iuka	796.0236	1967.0141	0.09	11.05
Betis	13.6768	33.7962	0.00	0.19

SUBBASIN #	13	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
		8659.0200	21396.8714	0.97	

LANDUSE:

Residential-High Density --> URHD	1.5022	3.7120	0.00	0.02
Range-Brush --> RNGB	722.5601	1785.4822	0.08	8.34
Pasture --> PAST	3981.3940	9838.2236	0.45	45.98
Range-Grasses --> RNGE	0.3953	0.9768	0.00	0.00
Water --> WATR	45.6986	112.9236	0.01	0.53
Wetlands-Forested --> WETF	754.1855	1863.6300	0.08	8.71

Table11-18

Wetlands-Mixed --> WETL	1.4231	3.5167	0.00	0.02
TPML, SR319 Pasture --> TPML	2.9253	7.2287	0.00	0.03
Forest-Deciduous --> FRSD	591.1568	1460.7780	0.07	6.83
Forest-Evergreen --> FRSE	1098.6646	2714.8550	0.12	12.69
Forest-Mixed --> FRST	911.8378	2253.1968	0.10	10.53
Residential-Low Density --> URLD	537.6309	1328.5128	0.06	6.21
Agricultural Land-Row Crops --> AGRR	3.5579	8.7916	0.00	0.04
Residential-Medium Density --> URMD	6.0879	15.0435	0.00	0.07

SOIL:

Keechi	44.6708	110.3838	0.00	0.52
Laneville	833.0116	2058.4134	0.09	9.62
Attoyac	80.9609	200.0584	0.01	0.93
Rentzel	48.3077	119.3708	0.01	0.56
Derly	14.8639	36.7295	0.00	0.17
Woodtell	8.6970	21.4906	0.00	0.10
Bernaldo	210.8620	521.0505	0.02	2.44
Sawlit	372.2303	919.7998	0.04	4.30
Kirvin	975.0885	2409.4925	0.11	11.26
Water	23.3237	57.6340	0.00	0.27
Sacul	316.8860	783.0411	0.04	3.66
Lilbert	126.0270	311.4190	0.01	1.46
Ulto	533.5987	1318.5490	0.06	6.16
Cuthbert	869.9342	2149.6510	0.10	10.05
Tenaha	192.7565	476.3109	0.02	2.23
Mollville	7.9063	19.5370	0.00	0.09
Mattex	39.6898	98.0755	0.00	0.46
Latex	194.4168	480.4137	0.02	2.25
Darco	18.7380	46.3026	0.00	0.22
Bowie	617.4058	1525.6407	0.07	7.13
Woden	16.3661	40.4415	0.00	0.19
Bienville	5.8507	14.4573	0.00	0.07
Hannahatchee	17.9474	44.3489	0.00	0.21
Maben	113.2187	279.7692	0.01	1.31
Redsprings	2682.9363	6629.6698	0.30	30.98
Meth	33.0485	81.6645	0.00	0.38
Gallime	138.5981	342.4828	0.02	1.60
Betis	49.8099	123.0828	0.01	0.58
Iulus	71.8686	177.5909	0.01	0.83

Area [ha]

Area [acres] %Wat.Area %Sub.Area

Table11-19

SUBBASIN #	14	3219.7492	7956.1613	0.36
LANDUSE:				
SR319 - Poultry Headquarters	Range-Brush --> RNGB	240.7052	594.7947	0.03 7.48
	Poultry Headquarters --> TBHQ	3.4047	8.4132	0.00 0.11
	Pasture --> PAST	1137.5698	2810.9918	0.13 35.33
	Water --> WATR	16.8652	41.6748	0.00 0.52
	Wetlands-Forested --> WETF	394.6299	975.1502	0.04 12.26
	Wetlands-Mixed --> WETL	2.1378	5.2827	0.00 0.07
	TPML, SR319 Pasture --> TPML	29.8506	73.7624	0.00 0.93
	TPMV, SR319 Pasture --> TPMV	31.8301	78.6538	0.00 0.99
	Forest-Deciduous --> FRSD	335.1662	828.2124	0.04 10.41
	Forest-Evergreen --> FRSE	508.5690	1256.6994	0.06 15.80
	Forest-Mixed --> FRST	394.8674	975.7372	0.04 12.26
	Residential-Low Density --> URLD	123.5990	305.4192	0.01 3.84
	Residential-Medium Density --> URMD	0.5543	1.3696	0.00 0.02
SOIL:				
Laneville	435.8823	1077.0870	0.05	13.54
Rentzel	9.1848	22.6961	0.00	0.29
Derly	1.1877	2.9348	0.00	0.04
Bernaldo	2.1378	5.2827	0.00	0.07
Woodtell	153.6871	379.7686	0.02	4.77
Sawlit	371.1928	917.2360	0.04	11.53
Kirvin	116.9479	288.9841	0.01	3.63
Water	15.3608	37.9573	0.00	0.48
Sacul	17.1819	42.4574	0.00	0.53
Lilbert	202.6200	500.6841	0.02	6.29
Ulto	73.6368	181.9602	0.01	2.29
Cuthbert	24.6248	60.8491	0.00	0.76
Tenaha	451.4015	1115.4357	0.05	14.02
Bowie	4.3549	10.7611	0.00	0.14
Mattex	119.4816	295.2451	0.01	3.71
Latex	114.2558	282.3318	0.01	3.55
Darco	208.4001	514.9670	0.02	6.47
Woden	1.7419	4.3044	0.00	0.05
Maben	242.7639	599.8817	0.03	7.54
Redsprings	406.7443	1005.0856	0.05	12.63
Meth	15.5983	38.5443	0.00	0.48
Gallime	43.6278	107.8065	0.00	1.36
Betis	103.0123	254.5486	0.01	3.20
Iulus	84.7219	209.3521	0.01	2.63

Table11-20

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	15	3906.0420	9652.0251	0.44		
LANDUSE:						
Range-Brush --> RNGB		348.9994	862.3950	0.04	8.93	
Pasture --> PAST		1191.2946	2943.7485	0.13	30.50	
Water --> WATR		12.8878	31.8465	0.00	0.33	
Wetlands-Forested --> WETF		372.8775	921.3989	0.04	9.55	
Wetlands-Mixed --> WETL		0.3953	0.9769	0.00	0.01	
Forest-Deciduous --> FRSD		395.0161	976.1046	0.04	10.11	
Forest-Evergreen --> FRSE		858.9782	2122.5780	0.10	21.99	
Forest-Mixed --> FRST		593.9474	1467.6736	0.07	15.21	
Residential-Low Density --> URLD		116.5440	287.9860	0.01	2.98	
Agricultural Land-Row Crops --> AGRR		15.1017	37.3170	0.00	0.39	
SOIL:						
Laneville		555.6001	1372.9157	0.06	14.22	
Derly		4.5859	11.3319	0.00	0.12	
Woodtell		387.2676	956.9576	0.04	9.91	
Sawlit		417.3919	1031.3963	0.05	10.69	
Kirvin		127.6924	315.5342	0.01	3.27	
Water		2.9255	7.2290	0.00	0.07	
Sacul		378.2540	934.6846	0.04	9.68	
Lilbert		141.3709	349.3345	0.02	3.62	
Ulto		274.9932	679.5219	0.03	7.04	
Cuthbert		355.9573	879.5882	0.04	9.11	
Tenaha		43.4075	107.2621	0.00	1.11	
Mattex		89.5032	221.1670	0.01	2.29	
Latex		22.7711	56.2686	0.00	0.58	
Darco		60.7231	150.0497	0.01	1.55	
Bowie		25.6966	63.4976	0.00	0.66	
Bienville		7.0369	17.3886	0.00	0.18	
Maben		48.7840	120.5477	0.01	1.25	
Redsprings		844.4300	2086.6286	0.09	21.62	
Gallime		14.0738	34.7771	0.00	0.36	
Iulus		103.5771	255.9441	0.01	2.65	
SUBBASIN #	16	5009.5968	12378.9642	0.56		

Table11-21

LANDUSE:

Residential-High Density --> URHD	1.0283	2.5409	0.00	0.02
Range-Brush --> RNGB	375.9472	928.9842	0.04	7.50
SR319 - Poultry Headquarters --> TBHQ	1.5819	3.9090	0.00	0.03
Pasture --> PAST	1977.6577	4886.8910	0.22	39.48
Range-Grasses --> RNGE	0.5537	1.3682	0.00	0.01
Water --> WATR	15.6612	38.6995	0.00	0.31
Wetlands-Forested --> WETF	191.2561	472.6034	0.02	3.82
Wetlands-Mixed --> WETL	0.7119	1.7591	0.00	0.01
TPMV, SR319 Pasture --> TPMV	23.6499	58.4402	0.00	0.47
Forest-Deciduous --> FRSD	349.8452	864.4850	0.04	6.98
Forest-Evergreen --> FRSE	943.3877	2331.1582	0.11	18.83
Forest-Mixed --> FRST	899.3308	2222.2914	0.10	17.95
Residential-Low Density --> URLD	227.8779	563.0977	0.03	4.55
Residential-Medium Density --> URMD	1.1074	2.7363	0.00	0.02

SOIL:

Laneville	435.1116	1075.1825	0.05	8.69
Derly	8.3052	20.5225	0.00	0.17
Woodtell	806.4711	1992.8305	0.09	16.10
Sawlit	709.3402	1752.8152	0.08	14.16
Kirvin	136.9166	338.3277	0.02	2.73
Water	9.4125	23.2588	0.00	0.19
Sacul	136.2047	336.5687	0.02	2.72
Lilbert	181.2899	447.9764	0.02	3.62
Ulto	710.6058	1755.9424	0.08	14.18
Cuthbert	147.1201	363.5411	0.02	2.94
Tenaha	69.4470	171.6070	0.01	1.39
Mattex	18.9832	46.9085	0.00	0.38
Latex	90.8031	224.3791	0.01	1.81
Darco	3.8757	9.5772	0.00	0.08
Woden	1.8192	4.4954	0.00	0.04
Hannahatchee	104.3287	257.8014	0.01	2.08
Maben	19.8533	49.0585	0.00	0.40
Redsprings	1372.7252	3392.0727	0.15	27.40
Meth	43.6614	107.8896	0.00	0.87
Betis	3.3221	8.2090	0.00	0.07

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	17	4839.9408	11959.7357	0.54	

Table11-22

LANDUSE:

Residential-High Density --> URHD	22.9302	56.6618	0.00	0.47
Range-Brush --> RNGB	502.5676	1241.8696	0.06	10.38
Pasture --> PAST	1531.0283	3783.2475	0.17	31.63
Range-Grasses --> RNGE	2.0558	5.0800	0.00	0.04
Water --> WATR	26.5674	65.6495	0.00	0.55
Wetlands-Forested --> WETF	891.5119	2202.9704	0.10	18.42
Wetlands-Mixed --> WETL	1.9767	4.8846	0.00	0.04
Forest-Deciduous --> FRSD	374.3954	925.1499	0.04	7.74
Forest-Evergreen --> FRSE	442.9490	1094.5490	0.05	9.15
Forest-Mixed --> FRST	421.6001	1041.7950	0.05	8.71
Residential-Low Density --> URLD	465.5629	1150.4292	0.05	9.62
Agricultural Land-Row Crops --> AGRR	107.2977	265.1380	0.01	2.22
Residential-Medium Density --> URMD	49.4977	122.3113	0.01	1.02

SOIL:

Ochlockonee	35.1070	86.7511	0.00	0.73
Mantachie	647.4234	1599.8157	0.07	13.38
Ruston	20.0047	49.4325	0.00	0.41
Marietta	279.9861	691.8597	0.03	5.78
Alazan	34.6326	85.5788	0.00	0.72
Woodtell	45.2279	111.7604	0.01	0.93
Briley	75.7489	187.1792	0.01	1.57
Percilla	13.9954	34.5832	0.00	0.29
Water	8.0651	19.9293	0.00	0.17
Lilbert	364.5117	900.7267	0.04	7.53
Sacul	649.4002	1604.7003	0.07	13.42
Cuthbert	72.1116	178.1915	0.01	1.49
Tenaha	29.4140	72.6834	0.00	0.61
Elrose	427.6885	1056.8396	0.05	8.84
Darco	355.9722	879.6251	0.04	7.35
Bowie	654.1444	1616.4234	0.07	13.52
Nacogdoches	527.7908	1304.1975	0.06	10.90
Angelina	0.2372	0.5862	0.00	0.00
Alto	1.9767	4.8846	0.00	0.04
Iuka	263.2233	650.4380	0.03	5.44
Bienville	66.5768	164.5145	0.01	1.38
Hannahatchee	30.8372	76.2003	0.00	0.64
Bub	36.1349	89.2911	0.00	0.75
Trawick	70.8465	175.0653	0.01	1.46
Betis	128.8838	318.4782	0.01	2.66

Table11-23

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	18	8681.5512	21452.5471	0.97		
LANDUSE:						
Residential-High Density --> URHD		109.0333	269.4268	0.01	1.26	
Range-Brush --> RNGB		700.4541	1730.8571	0.08	8.07	
Pasture --> PAST		2359.5159	5830.4819	0.26	27.18	
Range-Grasses --> RNGE		6.4044	15.8256	0.00	0.07	
Water --> WATR		28.7013	70.9224	0.00	0.33	
Wetlands-Forested --> WETF		502.3914	1241.4343	0.06	5.79	
Wetlands-Mixed --> WETL		0.4744	1.1723	0.00	0.01	
Forest-Deciduous --> FRSD		1048.1906	2590.1313	0.12	12.07	
Forest-Evergreen --> FRSE		874.5595	2161.0804	0.10	10.07	
TPHL, SR319 Pasture --> TPHL		48.3099	119.3762	0.01	0.56	
Forest-Mixed --> FRST		1088.5938	2689.9697	0.12	12.54	
Residential-Low Density --> URLD		1651.3923	4080.6730	0.18	19.02	
TPVL, SR319 Pasture --> TPVL		20.2411	50.0169	0.00	0.23	
Agricultural Land-Row Crops --> AGRR		103.2614	255.1642	0.01	1.19	
Residential-Medium Density --> URMD		140.0276	346.0151	0.02	1.61	
SOIL:						
Ochlockonee		14.8646	36.7311	0.00	0.17	
Mantachie		119.5492	295.4121	0.01	1.38	
Ruston		24.5898	60.7627	0.00	0.28	
Marietta		83.0203	205.1473	0.01	0.96	
Alazan		119.5492	295.4121	0.01	1.38	
Woodtell		4.1115	10.1597	0.00	0.05	
Briley		148.3296	366.5299	0.02	1.71	
Percilla		47.5192	117.4224	0.01	0.55	
Water		32.4965	80.3005	0.00	0.37	
Sacul		231.8243	572.8494	0.03	2.67	
Lilbert		504.9215	1247.6864	0.06	5.82	
Tenaha		21.1109	52.1660	0.00	0.24	
Elrose		905.8701	2238.4502	0.10	10.43	
Cuthbert		241.0751	595.7087	0.03	2.78	
Darco		341.3320	843.4485	0.04	3.93	
Bowie		1068.6689	2640.7343	0.12	12.31	
Nacogdoches		2030.5974	5017.7078	0.23	23.39	
Angelina		60.7234	150.0506	0.01	0.70	
Alto		90.1363	222.7314	0.01	1.04	

Table11-24

Bienville	0.4744	1.1723	0.00	0.01
Hannahatchee	442.0633	1092.3606	0.05	5.09
Iuka	219.0155	541.1981	0.02	2.52
Tuscosso	75.3508	186.1956	0.01	0.87
Bub	598.8531	1479.7959	0.07	6.90
Trawick	903.2608	2232.0027	0.10	10.40
Betis	352.2433	870.4107	0.04	4.06

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	19	138.5867	342.4547	0.02	

LANDUSE:

Pasture --> PAST	0.6412	1.5845	0.00	0.46
Wetlands-Forested --> WETF	128.5674	317.6965	0.01	92.77
Forest-Deciduous --> FRSD	6.0116	14.8549	0.00	4.34
Forest-Evergreen --> FRSE	1.1222	2.7729	0.00	0.81
Forest-Mixed --> FRST	2.2443	5.5458	0.00	1.62

SOIL:

Mantachie	122.4757	302.6436	0.01	88.37
Marietta	0.4809	1.1884	0.00	0.35
Elrose	1.5229	3.7632	0.00	1.10
Angelina	13.5461	33.4730	0.00	9.77
Tuscosso	0.1603	0.3961	0.00	0.12
Betis	0.4008	0.9903	0.00	0.29

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	20	6147.2252	15190.1008	0.69	

LANDUSE:

Residential-High Density --> URHD	1.1859	2.9303	0.00	0.02
Range-Brush --> RNGB	535.2941	1322.7384	0.06	8.71
SR319 - Poultry Headquarters --> TBHQ	8.4591	20.9028	0.00	0.14
Pasture --> PAST	1943.8504	4803.3515	0.22	31.62
Range-Grasses --> RNGE	2.2926	5.6653	0.00	0.04
Water --> WATR	17.3135	42.7824	0.00	0.28
Wetlands-Forested --> WETF	345.3995	853.4994	0.04	5.62
SR319 Pasture, no litter --> TBPA	25.8516	63.8806	0.00	0.42
Wetlands-Mixed --> WETL	0.2372	0.5861	0.00	0.00

Table11-25

TPML, SR319 Pasture --> TPML	73.6810	182.0694	0.01	1.20
TPMM, SR319 Pasture --> TPMM	92.1013	227.5868	0.01	1.50
TPMV, SR319 Pasture --> TPMV	7.4313	18.3632	0.00	0.12
Forest-Deciduous --> FRSD	917.4550	2267.0772	0.10	14.92
Forest-Evergreen --> FRSE	675.3829	1668.9048	0.08	10.99
TPHL, SR319 Pasture --> TPHL	77.8710	192.4232	0.01	1.27
Forest-Mixed --> FRST	827.8836	2045.7417	0.09	13.47
Residential-Low Density --> URLD	493.8683	1220.3732	0.06	8.03
TPVL, SR319 Pasture --> TPVL	43.5603	107.6398	0.00	0.71
Agricultural Land-Row Crops --> AGRR	49.2524	121.7052	0.01	0.80
Residential-Medium Density --> URMD	8.8544	21.8796	0.00	0.14

SOIL:

Ochlockonee	25.5354	63.0992	0.00	0.42
Mantachie	188.7088	466.3088	0.02	3.07
Attoiac	2.5298	6.2513	0.00	0.04
Marietta	57.4743	142.0220	0.01	0.93
Alazan	59.2927	146.5151	0.01	0.96
Woodtell	34.7850	85.9555	0.00	0.57
Briley	92.7337	229.1496	0.01	1.51
Percilla	25.2982	62.5131	0.00	0.41
Water	4.2691	10.5491	0.00	0.07
Lilbert	592.9265	1465.1511	0.07	9.65
Sacul	573.3995	1416.8988	0.06	9.33
Cuthbert	334.4896	826.5406	0.04	5.44
Elrose	660.9945	1633.3505	0.07	10.75
Tenaha	36.2871	89.6672	0.00	0.59
Darco	605.4966	1496.2123	0.07	9.85
Bowie	902.7504	2230.7414	0.10	14.69
Nacogdoches	381.3704	942.3852	0.04	6.20
Angelina	5.2178	12.8933	0.00	0.08
Alto	6.4036	15.8236	0.00	0.10
Bienville	1.5811	3.9071	0.00	0.03
Iuka	441.5326	1091.0492	0.05	7.18
Hannahatchee	88.7809	219.3820	0.01	1.44
Bub	257.1720	635.4849	0.03	4.18
Trawick	362.0805	894.7190	0.04	5.89
Betis	406.1152	1003.5308	0.05	6.61

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		10474.4824	25882.9697	1.17	

Table11-26

LANDUSE:

	Range-Brush --> RNGB	857.0089	2117.7117	0.10	8.18
SR319 - Poultry Headquarters --> TBHQ	27.2757	67.3995	0.00	0.26	
Pasture --> PAST	2550.8663	6303.3182	0.29	24.35	
TPLH, SR319 Pastureland --> TPLH	17.9466	44.3469	0.00	0.17	
Water --> WATR	20.2393	50.0124	0.00	0.19	
Wetlands-Forested --> WETF	467.7181	1155.7549	0.05	4.47	
Wetlands-Mixed --> WETL	1.2650	3.1258	0.00	0.01	
TPMH, SR319 Pasture --> TPMH	67.9124	167.8150	0.01	0.65	
TPMV, SR319 Pasture --> TPMV	71.3120	176.2155	0.01	0.68	
TPHH, SR319 Pasture --> TPHH	56.7650	140.2691	0.01	0.54	
Forest-Deciduous --> FRSD	1089.3658	2691.8773	0.12	10.40	
Forest-Evergreen --> FRSE	2646.5287	6539.7048	0.30	25.27	
Forest-Mixed --> FRST	1995.4708	4930.9081	0.22	19.05	
Residential-Low Density --> URLD	564.0130	1393.7044	0.06	5.38	
TPVH, SR319 Pasture --> TPVH	24.9039	61.5387	0.00	0.24	
Agricultural Land-Row Crops --> AGR	8.1432	20.1222	0.00	0.08	
Residential-Medium Density --> URMD	7.7479	19.1454	0.00	0.07	

SOIL:

Laneville	985.9555	2436.3453	0.11	9.41
Attoyac	118.1945	292.0645	0.01	1.13
Rentzel	53.2863	131.6732	0.01	0.51
Derly	1.7393	4.2979	0.00	0.02
Bernaldo	15.1795	37.5093	0.00	0.14
Sawlit	682.3656	1686.1596	0.08	6.51
Naconiche	17.4722	43.1748	0.00	0.17
Kirvin	907.2909	2241.9612	0.10	8.66
Water	19.5278	48.2541	0.00	0.19
Sacul	224.8462	555.6063	0.03	2.15
Lilbert	664.0237	1640.8359	0.07	6.34
Ulto	555.0002	1371.4332	0.06	5.30
Cuthbert	1496.2078	3697.2043	0.17	14.28
Tenaha	951.0901	2350.1912	0.11	9.08
Mollville	47.8312	118.1933	0.01	0.46
Darco	438.6241	1083.8621	0.05	4.19
Bowie	109.3398	270.1841	0.01	1.04
Woden	10.8312	26.7644	0.00	0.10
Hannahatchee	187.6881	463.7867	0.02	1.79
Maben	0.3162	0.7814	0.00	0.00
Redsprings	2585.4945	6388.8862	0.29	24.68

Table11-27

Meth	29.6474	73.2603	0.00	0.28
Iulus	14.7842	36.5325	0.00	0.14
Betis	357.7459	884.0079	0.04	3.42
<hr/>				
SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
	22	6021.5248	14879.4889	0.67
LANDUSE:				
Residential-High Density --> URHD	6.9618	17.2031	0.00	0.12
Range-Brush --> RNGB	452.5202	1118.2000	0.05	7.52
SR319 - Poultry Headquarters --> TBHQ	15.7433	38.9024	0.00	0.26
Pasture --> PAST	1262.5472	3119.8172	0.14	20.97
Range-Grasses --> RNGE	0.6329	1.5639	0.00	0.01
Water --> WATR	13.2908	32.8422	0.00	0.22
Wetlands-Forested --> WETF	285.2776	704.9352	0.03	4.74
Wetlands-Mixed --> WETL	1.1076	2.7369	0.00	0.02
TPMH, SR319 Pasture --> TPMH	82.9884	205.0685	0.01	1.38
TPMV, SR319 Pasture --> TPMV	26.5816	65.6845	0.00	0.44
TPHH, SR319 Pasture --> TPHH	25.2367	62.3612	0.00	0.42
Forest-Deciduous --> FRSD	741.3578	1831.9322	0.08	12.31
Forest-Evergreen --> FRSE	1472.5102	3638.6463	0.16	24.45
TPHM, SR319 Pasture --> TPHM	21.8349	53.9551	0.00	0.36
Forest-Mixed --> FRST	1108.5162	2739.1991	0.12	18.41
Residential-Low Density --> URLD	462.6465	1143.2227	0.05	7.68
Agricultural Land-Row Crops --> AGRR	32.7523	80.9327	0.00	0.54
Residential-Medium Density --> URMD	9.0188	22.2858	0.00	0.15
SOIL:				
Laneville	539.0686	1332.0655	0.06	8.95
Attoyac	123.2564	304.5727	0.01	2.05
Rentzel	22.4678	55.5190	0.00	0.37
Bernaldo	91.5325	226.1814	0.01	1.52
Sawlit	246.5919	609.3408	0.03	4.10
Kirvin	192.8749	476.6034	0.02	3.20
Water	9.4143	23.2633	0.00	0.16
Sacul	76.5803	189.2338	0.01	1.27
Lilbert	737.9560	1823.5262	0.08	12.26
Ulto	133.4618	329.7908	0.01	2.22
Cuthbert	1241.6616	3068.2079	0.14	20.62
Tenaha	597.1368	1475.5549	0.07	9.92
Bowie	32.1986	79.5642	0.00	0.53

Table11-28

Mollville	18.3540	45.3536	0.00	0.30
Darco	392.1578	969.0415	0.04	6.51
Hannahatchee	62.2611	153.8502	0.01	1.03
Bienville	28.8759	71.3537	0.00	0.48
Redsprings	878.1423	2169.9336	0.10	14.58
Tonkawa	258.4586	638.6642	0.03	4.29
Betis	116.3736	287.5651	0.01	1.93
Iulus	222.7001	550.3030	0.02	3.70
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SUBBASIN #	23	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:		18775.0576	46394.1061	2.10
Residential-High Density --> URHD		0.6326	1.5632	0.00 0.00
Range-Brush --> RNGB		1735.2112	4287.7936	0.19 9.24
Pasture --> PAST		4544.4915	11229.6657	0.51 24.20
Range-Grasses --> RNGE		3.0839	7.6205	0.00 0.02
Water --> WATR		834.3943	2061.8300	0.09 4.44
Wetlands-Forested --> WETF		2044.8670	5052.9685	0.23 10.89
Wetlands-Mixed --> WETL		6.1678	15.2410	0.00 0.03
TPMH, SR319 Pasture --> TPMH		41.8304	103.3651	0.00 0.22
Forest-Deciduous --> FRSD		2639.0329	6521.1822	0.30 14.06
Forest-Evergreen --> FRSE		3180.4561	7859.0660	0.36 16.94
Forest-Mixed --> FRST		2746.2579	6786.1406	0.31 14.63
Residential-Low Density --> URLD		908.4080	2244.7217	0.10 4.84
Agricultural Land-Row Crops --> AGRR		89.1170	220.2125	0.01 0.47
Residential-Medium Density --> URMD		1.1070	2.7356	0.00 0.01
SOIL:				
Ochlockonee	9.2517	22.8615	0.00	0.05
Mantachie	278.0260	687.0161	0.03	1.48
Keechi	23.7224	58.6191	0.00	0.13
Laneville	846.0973	2090.7488	0.09	4.51
Ruston	216.1897	534.2156	0.02	1.15
Attoyac	78.9954	195.2017	0.01	0.42
Rentzel	11.2286	27.7464	0.00	0.06
Derly	1.2652	3.1264	0.00	0.01
Alazan	111.8114	276.2915	0.01	0.60
Bernaldo	22.5362	55.6882	0.00	0.12
Woodtell	139.0130	343.5081	0.02	0.74
Briley	169.2985	418.3452	0.02	0.90

Table11-29

Pits	10.8332	26.7694	0.00	0.06
Sawlit	312.0280	771.0369	0.03	1.66
Percilla	25.3038	62.5271	0.00	0.13
Kirvin	591.9518	1462.7426	0.07	3.15
Water	798.3363	1972.7289	0.09	4.25
Lilbert	1466.0415	3622.6619	0.16	7.81
Sacul	3269.4940	8079.0831	0.37	17.41
Ulto	217.8503	538.3190	0.02	1.16
Elrose	366.7476	906.2517	0.04	1.95
Cuthbert	1481.6983	3661.3505	0.17	7.89
Tenaha	590.9239	1460.2024	0.07	3.15
Mattex	186.6949	461.3325	0.02	0.99
Latex	109.7554	271.2111	0.01	0.58
Darco	879.8621	2174.1833	0.10	4.69
Bowie	2140.7053	5289.7898	0.24	11.40
Nacogdoches	1097.4752	2711.9161	0.12	5.85
Woden	11.6240	28.7234	0.00	0.06
Angelina	234.2187	578.7662	0.03	1.25
Iuka	630.9356	1559.0733	0.07	3.36
Bienville	116.2395	287.2337	0.01	0.62
Hannahatchee	256.5177	633.8681	0.03	1.37
Tuscosso	0.8698	2.1494	0.00	0.00
Redsprings	1023.6987	2529.6106	0.11	5.45
Bub	130.3148	322.0144	0.01	0.69
Gallime	30.2065	74.6417	0.00	0.16
Iulus	111.4160	275.3145	0.01	0.59
Trawick	449.3805	1110.4416	0.05	2.39
Betis	326.4987	806.7946	0.04	1.74

SUBBASIN #	24	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		4283.8548	10585.6194	0.48	
LANDUSE:					
Range-Brush --> RNGB		247.1135	610.6298	0.03	5.77
Pasture --> PAST		1015.9111	2510.3672	0.11	23.71
Water --> WATR		10.9986	27.1782	0.00	0.26
Wetlands-Forested --> WETF		699.2450	1727.8693	0.08	16.32
Forest-Deciduous --> FRSD		490.0333	1210.8968	0.05	11.44
Forest-Evergreen --> FRSE		774.0991	1912.8376	0.09	18.07
Forest-Mixed --> FRST		852.5139	2106.6045	0.10	19.90

Table11-30

Residential-Low Density --> URLD	193.5446	478.2583	0.02	4.52
Residential-Medium Density --> URMD	0.3956	0.9776	0.00	0.01

SOIL:

Keechi	1.8199	4.4971	0.00	0.04
Laneville	467.7986	1155.9538	0.05	10.92
Attojac	17.1706	42.4293	0.00	0.40
Rentzel	13.7681	34.0216	0.00	0.32
Woodtell	138.1557	341.3896	0.02	3.23
Bernaldo	5.6971	14.0779	0.00	0.13
Sawlit	278.5269	688.2539	0.03	6.50
Naconiche	2.9277	7.2345	0.00	0.07
Kirvin	90.1256	222.7049	0.01	2.10
Water	12.9768	32.0664	0.00	0.30
Sacul	82.0547	202.7612	0.01	1.92
Lilbert	238.1722	588.5353	0.03	5.56
Ulto	862.8004	2132.0230	0.10	20.14
Cuthbert	480.2216	1186.6515	0.05	11.21
Tenaha	165.6127	409.2374	0.02	3.87
Mattex	371.0263	916.8246	0.04	8.66
Latex	17.2497	42.6248	0.00	0.40
Darco	4.1146	10.1674	0.00	0.10
Bowie	120.1147	296.8095	0.01	2.80
Bienville	16.6958	41.2561	0.00	0.39
Hannahatchee	13.7681	34.0216	0.00	0.32
Redsprings	729.7880	1803.3427	0.08	17.04
Gallime	29.1979	72.1493	0.00	0.68
Betis	50.4039	124.5505	0.01	1.18
Iulus	73.6672	182.0353	0.01	1.72

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	25	10296.2088	25442.4468	1.15	

LANDUSE:

Residential-High Density --> URHD	0.0791	0.1954	0.00	0.00
Range-Brush --> RNGB	1211.6256	2993.9875	0.14	11.77
SR319 - Poultry Headquarters --> TBHQ	54.3911	134.4032	0.01	0.53
Pasture --> PAST	2580.3372	6376.1423	0.29	25.06
Range-Grasses --> RNGE	1.6602	4.1024	0.00	0.02
Water --> WATR	42.4535	104.9048	0.00	0.41
Wetlands-Forested --> WETF	2911.4274	7194.2827	0.33	28.28

Table11-31

SR319 Pasture, no litter --> TBPA	28.4605	70.3273	0.00	0.28
Wetlands-Mixed --> WETL	12.0166	29.6937	0.00	0.12
TPMH, SR319 Pasture --> TPMH	144.9903	358.2783	0.02	1.41
TPSS, SR319 Pasture --> TPSS	27.9071	68.9598	0.00	0.27
TPMV, SR319 Pasture --> TPMV	238.4355	589.1861	0.03	2.32
TPHH, SR319 Pasture --> TPHH	54.3121	134.2078	0.01	0.53
Forest-Deciduous --> FRSD	218.4341	539.7617	0.02	2.12
Forest-Evergreen --> FRSE	2060.6173	5091.8885	0.23	20.01
TPHV, SR319 Pasture --> TPHV	3.3994	8.4002	0.00	0.03
Forest-Mixed --> FRST	331.5645	819.3125	0.04	3.22
TPVH, SR319 Pasture --> TPVH	19.2108	47.4709	0.00	0.19
Residential-Low Density --> URLD	338.9959	837.6757	0.04	3.29
Agricultural Land-Row Crops --> AGRR	15.5742	38.4846	0.00	0.15
Residential-Medium Density --> URMD	0.3162	0.7814	0.00	0.00

SOIL:

Keechi	3.9528	9.7677	0.00	0.04
Laneville	1026.1582	2535.6882	0.11	9.97
Attoyac	125.6214	310.4167	0.01	1.22
Rentzel	64.1942	158.6270	0.01	0.62
DREKA	0.3162	0.7814	0.00	0.00
Woodtell	426.8280	1054.7134	0.05	4.15
Bernaldo	52.1775	128.9333	0.01	0.51
Kawah	23.3218	57.6293	0.00	0.23
BRILEY	7.3523	18.1679	0.00	0.07
Sawlit	1087.9807	2688.4546	0.12	10.57
KULLIT	0.7115	1.7582	0.00	0.01
Naconiche	121.8266	301.0397	0.01	1.18
OSIER	18.5784	45.9081	0.00	0.18
Kirvin	496.4772	1226.8199	0.06	4.82
Water	59.8461	147.8826	0.01	0.58
Sacul	259.4647	641.1501	0.03	2.52
Lilbert	529.4439	1308.2823	0.06	5.14
Ulto	23.7171	58.6060	0.00	0.23
Tenaha	239.3842	591.5303	0.03	2.32
Cuthbert	2029.6271	5015.3099	0.23	19.71
Mattex	7.1151	17.5818	0.00	0.07
Latex	325.8724	805.2471	0.04	3.16
Darco	484.3024	1196.7354	0.05	4.70
Bowie	113.2885	279.9415	0.01	1.10
Hannahatchee	151.0777	373.3205	0.02	1.47
Bienville	17.4716	43.1731	0.00	0.17
Maben	304.1318	751.5248	0.03	2.95

Table11-32

	Redsprings	730.1693	1804.2848	0.08	7.09
	Meth	26.0888	64.4666	0.00	0.25
	Gallime	33.3620	82.4392	0.00	0.32
	Tonkawa	1301.0389	3214.9322	0.15	12.64
	Betis	164.1221	405.5538	0.02	1.59
	Iulus	41.1886	101.7792	0.00	0.40
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		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	26	10719.1632	26487.5882	1.20	
LANDUSE:					
	Range-Brush --> RRGB	1984.8077	4904.5590	0.22	18.52
SR319 -	Poultry Headquarters --> TBHQ	40.2465	99.4511	0.00	0.38
	Pasture --> PAST	2341.8074	5786.7231	0.26	21.85
	Range-Grasses --> RNGE	4.1907	10.3554	0.00	0.04
	Water --> WATR	54.5581	134.8158	0.01	0.51
	Wetlands-Forested --> WETF	2263.6074	5593.4871	0.25	21.12
SR319	Pasture, no litter --> TBPA	0.1581	0.3908	0.00	0.00
	Wetlands-Mixed --> WETL	4.7442	11.7231	0.00	0.04
	TPMH, SR319 Pasture --> TPMH	3.2419	8.0108	0.00	0.03
	Forest-Deciduous --> FRSD	577.3670	1426.7026	0.06	5.39
	Forest-Evergreen --> FRSE	2400.3189	5931.3081	0.27	22.39
	TPHM, SR319 Pasture --> TPHM	2.2930	5.6662	0.00	0.02
	Forest-Mixed --> FRST	497.5856	1229.5590	0.06	4.64
	TPVH, SR319 Pasture --> TPVH	5.8512	14.4585	0.00	0.05
	Residential-Low Density --> URLD	462.1624	1142.0264	0.05	4.31
	Agricultural Land-Row Crops --> AGRR	43.1721	106.6803	0.00	0.40
	Residential-Medium Density --> URMD	1.3442	3.3215	0.00	0.01
	SR 319 Hayland - no litter --> TBHA	31.7070	78.3495	0.00	0.30
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SOIL:					
	LANEVILLE	1265.3524	3126.7491	0.14	11.80
	Attoyac	45.7814	113.1280	0.01	0.43
	Rentzel	2.2930	5.6662	0.00	0.02
	Derly	2.6093	6.4477	0.00	0.02
	DREKA	12.8884	31.8478	0.00	0.12
	ALAZAN	14.5488	35.9509	0.00	0.14
	Woodtell	175.0603	432.5828	0.02	1.63
	Bernaldo	34.3163	84.7972	0.00	0.32
	Sawlit	624.4925	1543.1522	0.07	5.83
	Kirvin	681.5018	1684.0249	0.08	6.36

Table11-33

Water	49.9721	123.4834	0.01	0.47
Lilbert	507.2321	1253.3960	0.06	4.73
Sacul	38.9023	96.1295	0.00	0.36
Ulto	336.9160	832.5363	0.04	3.14
Tenaha	359.3718	888.0257	0.04	3.35
Cuthbert	1185.8874	2930.3870	0.13	11.06
EASTWOOD	858.7760	2122.0785	0.10	8.01
Mattex	7.1163	17.5847	0.00	0.07
Mollville	43.7255	108.0480	0.00	0.41
Darco	134.0231	331.1779	0.01	1.25
Bowie	146.9906	363.2211	0.02	1.37
LATEX	567.6414	1402.6703	0.06	5.30
Hannahatchee	151.1813	373.5765	0.02	1.41
Bienville	15.0232	37.1232	0.00	0.14
METCALF	609.6274	1506.4198	0.07	5.69
Redsprings	2243.8400	5544.6408	0.25	20.93
MABEN	254.2091	628.1634	0.03	2.37
METH	113.2278	279.7916	0.01	1.06
Gallime	66.3395	163.9282	0.01	0.62
OWENTOWN	16.2093	40.0540	0.00	0.15
BESNER	3.5581	8.7923	0.00	0.03
Iulus	17.4744	43.1801	0.00	0.16
BETIS	133.0743	328.8333	0.01	1.24

SUBBASIN #	27	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		1640.5091	4053.7800	0.18	
LANDUSE:					
Range-Brush --> RNGB	94.3022	233.0253	0.01	5.75	
Pasture --> PAST	208.5574	515.3558	0.02	12.71	
Water --> WATR	0.5543	1.3696	0.00	0.03	
Wetlands-Forested --> WETF	209.9035	518.6819	0.02	12.80	
Forest-Deciduous --> FRSD	111.4048	275.2869	0.01	6.79	
Forest-Evergreen --> FRSE	623.0593	1539.6107	0.07	37.98	
Forest-Mixed --> FRST	349.8127	864.4047	0.04	21.32	
Residential-Low Density --> URLD	35.2346	87.0666	0.00	2.15	
Agricultural Land-Row Crops --> AGRR	7.6804	18.9786	0.00	0.47	
SOIL:	Keechi	2.6129	6.4566	0.00	0.16

Table11-34

Laneville	365.4901	903.1444	0.04	22.28
Attoyac	6.5719	16.2394	0.00	0.40
Bernaldo	21.8534	54.0008	0.00	1.33
Sawlit	221.0677	546.2693	0.02	13.48
Kirvin	149.0148	368.2231	0.02	9.08
Sacul	9.5807	23.6743	0.00	0.58
Lilbert	74.6658	184.5028	0.01	4.55
Cuthbert	484.0210	1196.0402	0.05	29.50
Tenaha	28.5836	70.6315	0.00	1.74
Mollville	9.8974	24.4569	0.00	0.60
Darco	29.5338	72.9794	0.00	1.80
Bowie	58.5924	144.7848	0.01	3.57
Woden	7.9971	19.7612	0.00	0.49
Redsprings	42.9942	106.2408	0.00	2.62
Tonkawa	21.9326	54.1965	0.00	1.34
Betis	68.4898	169.2417	0.01	4.17
Iulus	37.6100	92.9362	0.00	2.29

SUBBASIN #	28	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	28	14993.0560	37048.5910	1.68	
LANDUSE:					
SR319 - Poultry Headquarters	Range-Brush ---> RNGB	1738.7378	4296.5081	0.19	11.60
	Pasture ---> PAST	2232.9562	5517.7464	0.25	14.89
TPLH, SR319 Pastureland	Range-Grasses ---> RNGE	10.3572	25.5931	0.00	0.07
	Water ---> WATR	56.6877	140.0780	0.01	0.38
SR319 Pasture, no litter	Wetlands-Forested ---> WETF	47.7536	118.0016	0.01	0.32
	Wetlands-Mixed ---> WETL	1059.5928	2618.3067	0.12	7.07
TPMH, SR319 Pasture	Forest-Deciduous ---> FRSD	34.5502	85.3753	0.00	0.23
TPMV, SR319 Pasture	Forest-Evergreen ---> FRSE	7.0365	17.3877	0.00	0.05
TPHH, SR319 Pasture	Forest-Mixed ---> FRST	15.6543	38.6826	0.00	0.10
Residential-Low Density	TPVH, SR319 Pasture	25.2999	62.5174	0.00	0.17
TPVM, SR319 Pasture	Forest-Deciduous ---> FRSD	1448.5792	3579.5117	0.16	9.66
Agricultural Land-Row Crops	Forest-Evergreen ---> FRSE	4639.0588	11463.3462	0.52	30.94
	Forest-Mixed ---> FRST	2761.4876	6823.7739	0.31	18.42
TPVH, SR319 Pasture	Residential-Low Density ---> URLD	690.6881	1706.7249	0.08	4.61
TPVM, SR319 Pasture	TPVH, SR319 Pasture ---> TPVH	23.9559	59.1962	0.00	0.16
	TPVM, SR319 Pasture ---> TPVM	0.4744	1.1722	0.00	0.00
	Agricultural Land-Row Crops ---> AGRR	149.2696	368.8526	0.02	1.00

Table11-35

Residential-Medium Density --> URMD	13.9150	34.3846	0.00	0.09
SR 319 Hayland - no litter --> TBHA	11.8593	29.3050	0.00	0.08

SOIL:

MANTACHIE	574.7828	1420.3171	0.06	3.83
Keechi	7.1156	17.5830	0.00	0.05
Laneville	76.6114	189.3105	0.01	0.51
RUSTON	158.9152	392.6874	0.02	1.06
ATTOYAC	62.5383	154.5352	0.01	0.42
RENTZEL	180.9736	447.1948	0.02	1.21
MARIETTA	449.8644	1111.6375	0.05	3.00
BERNALDO	158.2036	390.9291	0.02	1.06
Kawah	40.0846	99.0510	0.00	0.27
BRILEY	199.4742	492.9106	0.02	1.33
PERCILLA	14.2312	35.1660	0.00	0.09
PITS	13.2825	32.8216	0.00	0.09
Naconiche	68.6261	169.5784	0.01	0.46
KULLIT	95.5863	236.1985	0.01	0.64
WATER	31.0715	76.7792	0.00	0.21
OSIER	149.9812	370.6109	0.02	1.00
KIRVIN	1185.5390	2929.5262	0.13	7.91
LACERDA	175.3602	433.3237	0.02	1.17
Lilbert	638.9814	1578.9550	0.07	4.26
SACUL	571.9366	1413.2839	0.06	3.81
TENAHA	1436.3246	3549.2299	0.16	9.58
CUTHBERT	2468.9571	6100.9165	0.28	16.47
Mattex	25.7743	63.6896	0.00	0.17
DARCO	2635.9367	6513.5313	0.29	17.58
BOWIE	294.0326	726.5694	0.03	1.96
MOLLVILLE	5.4553	13.4803	0.00	0.04
NACOGDOCHES	1095.0127	2705.8311	0.12	7.30
ALTO	18.7378	46.3019	0.00	0.12
HANNAHATCHEE	23.8768	59.0008	0.00	0.16
IUKA	127.9228	316.1036	0.01	0.85
TUSCOSSO	11.6222	28.7189	0.00	0.08
TONKAWA	1173.6797	2900.2211	0.13	7.83
Iulus	18.4215	45.5205	0.00	0.12
Betis	421.7973	1042.2822	0.05	2.81
TRAWICK	382.3452	944.7942	0.04	2.55

Area [ha]

Area [acres] %Wat.Area %Sub.Area

Table11-36

SUBBASIN #	29	290.3759	717.5334	0.03
LANDUSE:				
Range-Brush ---> RNGB	6.1476	15.1911	0.00	2.12
Pasture ---> PAST	1.1976	2.9593	0.00	0.41
Water ---> WATR	2.9541	7.2996	0.00	1.02
Wetlands-Forested ---> WETF	157.6828	389.6421	0.02	54.30
Wetlands-Mixed ---> WETL	0.5589	1.3810	0.00	0.19
Forest-Deciduous ---> FRSD	43.9915	108.7052	0.00	15.15
Forest-Evergreen ---> FRSE	66.5062	164.3402	0.01	22.90
Forest-Mixed ---> FRST	10.3791	25.6473	0.00	3.57
Residential-Low Density ---> URLD	0.9581	2.3674	0.00	0.33

SOIL:				
Keechi	11.7364	29.0012	0.00	4.04
Sawlit	0.0798	0.1973	0.00	0.03
Kirvin	30.7382	75.9556	0.00	10.59
Sacul	18.2832	45.1788	0.00	6.30
Cuthbert	84.5499	208.9271	0.01	29.12
Mattex	144.9884	358.2735	0.02	49.93

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	30	6689.0808	16529.0531	0.75	
LANDUSE:					
Range-Brush ---> RNGB	525.0167	1297.3424	0.06	7.85	
SR319 - Poultry Headquarters ---> TBHQ	1.8183	4.4931	0.00	0.03	
Pasture ---> PAST	1045.2109	2582.7683	0.12	15.63	
Water ---> WATR	6.3245	15.6283	0.00	0.09	
Wetlands-Forested ---> WETF	1381.7560	3414.3881	0.15	20.66	
Wetlands-Mixed ---> WETL	1.5021	3.7117	0.00	0.02	
Forest-Deciduous ---> FRSD	762.8197	1884.9657	0.09	11.40	
Forest-Evergreen ---> FRSE	1123.9515	2777.3404	0.13	16.80	
Forest-Mixed ---> FRST	1530.3038	3781.4573	0.17	22.88	
TPVH, SR319 Pasture ---> TPVH	0.5534	1.3675	0.00	0.01	
Residential-Low Density ---> URLD	286.5812	708.1564	0.03	4.28	
Agricultural Land-Row Crops ---> AGR	0.3953	0.9768	0.00	0.01	
TPVV, SR319 Pasture ---> TPVV	21.8988	54.1129	0.00	0.33	
Residential-Medium Density ---> URMD	0.9487	2.3442	0.00	0.01	

SOIL:

Table11-37

Mantachie	9.7240	24.0285	0.00	0.15
Keechi	47.3551	117.0167	0.01	0.71
Laneville	1063.6311	2628.2857	0.12	15.90
RUSTON	8.3010	20.5121	0.00	0.12
RENTZEL	19.5270	48.2523	0.00	0.29
Attoyac	253.2192	625.7172	0.03	3.79
MARIETTA	22.9265	56.6525	0.00	0.34
Derly	0.2372	0.5861	0.00	0.00
Woodtell	0.8696	2.1489	0.00	0.01
Bernaldo	180.2497	445.4059	0.02	2.69
BRILEY	5.8502	14.4562	0.00	0.09
Sawlit	145.3065	359.0597	0.02	2.17
PITS	1.2649	3.1257	0.00	0.02
KULLIT	121.8266	301.0397	0.01	1.82
Water	10.9889	27.1541	0.00	0.16
KIRVIN	640.9931	1583.9260	0.07	9.58
Lilbert	249.0291	615.3635	0.03	3.72
SACUL	634.0361	1566.7349	0.07	9.48
Ulto	75.0250	185.3905	0.01	1.12
Tenaha	309.3495	764.4182	0.03	4.62
Cuthbert	782.2677	1933.0227	0.09	11.69
Latex	13.0444	32.2333	0.00	0.20
Mattex	411.2538	1016.2288	0.05	6.15
Darco	204.1248	504.4027	0.02	3.05
BOWIE	145.0694	358.4736	0.02	2.17
NACOGDOCHES	65.6172	162.1434	0.01	0.98
Woden	76.0527	187.9300	0.01	1.14
ALTO	7.1151	17.5818	0.00	0.11
Bienville	2.6879	6.6420	0.00	0.04
Hannahatchee	90.1248	222.7030	0.01	1.35
Redsprings	678.8613	1677.5003	0.08	10.15
Iulus	47.6713	117.7981	0.01	0.71
Betis	264.5243	653.6527	0.03	3.95
TRAWICK	100.9556	249.4664	0.01	1.51

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	31	9624.2256	23781.9427	1.08	
<hr/>					
LANDUSE:					
Range-Brush --> RNGB		719.8128	1778.6935	0.08	7.48
SR319 - Poultry Headquarters --> TBHQ		7.5895	18.7539	0.00	0.08

Table11-38

Pasture	-->	PAST	1683.6742	4160.4432	0.19	17.49
Water	-->	WATR	8.0638	19.9261	0.00	0.08
Wetlands-Forested	-->	WETF	1524.9280	3768.1734	0.17	15.84
	TPLL	--> TPLL	19.6852	48.6430	0.00	0.20
SR319 Pasture, no litter	-->	TBPA	39.3703	97.2860	0.00	0.41
	Wetlands-Mixed	--> WETL	1.7393	4.2978	0.00	0.02
TPMV, SR319 Pasture	-->	TPMV	11.9376	29.4984	0.00	0.12
Forest-Deciduous	-->	FRSD	1370.9252	3387.6248	0.15	14.24
Forest-Evergreen	-->	FRSE	2056.1112	5080.7535	0.23	21.36
	Forest-Mixed	--> FRST	1559.3968	3853.3475	0.17	16.20
Residential-Low Density	-->	URLD	580.0403	1433.3085	0.06	6.03
Agricultural Land-Row Crops	-->	AGR	33.2829	82.2438	0.00	0.35
Residential-Medium Density	-->	URMD	7.6685	18.9493	0.00	0.08

SOIL:

Mantachie		1237.6353	3058.2588	0.14	12.86
Laneville		24.4286	60.3642	0.00	0.25
Ruston		61.9806	153.1571	0.01	0.64
Attoyac		2.6089	6.4467	0.00	0.03
Marietta		49.4105	122.0959	0.01	0.51
Derly		9.8031	24.2238	0.00	0.10
Bernaldo		4.7434	11.7212	0.00	0.05
Woodtell		19.9223	49.2291	0.00	0.21
Briley		10.2774	25.3960	0.00	0.11
Sawlit		122.6963	303.1886	0.01	1.27
Percilla		33.6782	83.2206	0.00	0.35
Kirvin		119.3759	294.9838	0.01	1.24
LaCerda		42.7698	105.6862	0.00	0.44
Lilbert		93.6824	231.4939	0.01	0.97
Sacul		2586.5037	6391.3800	0.29	26.87
Ulto		182.3051	450.4851	0.02	1.89
Elrose		592.1360	1463.1976	0.07	6.15
Cuthbert		330.2996	816.1869	0.04	3.43
Mattex		45.9320	113.5004	0.01	0.48
Latex		16.2067	40.0475	0.00	0.17
Darco		144.7531	357.6922	0.02	1.50
Bowie		1519.3150	3754.3033	0.17	15.79
Nacogdoches		462.2455	1142.2318	0.05	4.80
Alto		15.4161	38.0939	0.00	0.16
Iuka		769.6187	1901.7662	0.09	8.00
Bienville		26.2469	64.8574	0.00	0.27
Hannahatchee		124.2774	307.0957	0.01	1.29
Redsprings		90.2829	223.0937	0.01	0.94

Table11-39

Bub	481.7726	1190.4841	0.05	5.01
Iulus	21.5035	53.1361	0.00	0.22
Trawick	285.8697	706.3982	0.03	2.97
Betis	96.5284	238.5266	0.01	1.00
<hr/>				
SUBBASIN #	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
32	5615.0144	13874.9813	0.63	
LANDUSE:				
Residential-High Density --> URHD	0.6327	1.5635	0.00	0.01
Range-Brush --> RRGB	544.4498	1345.3627	0.06	9.70
SR319 - Poultry Headquarters --> TBHQ	6.1690	15.2438	0.00	0.11
Pasture --> PAST	679.2178	1678.3810	0.08	12.10
Water --> WATR	29.1839	72.1149	0.00	0.52
Wetlands-Forested --> WETF	585.1807	1446.0109	0.07	10.42
Forest-Deciduous --> FRSD	557.8159	1378.3909	0.06	9.93
Forest-Evergreen --> FRSE	1484.5827	3668.4781	0.17	26.44
Forest-Mixed --> FRST	1352.9784	3343.2772	0.15	24.10
Residential-Low Density --> URLD	355.6640	878.8635	0.04	6.33
Agricultural Land-Row Crops --> AGRR	10.6770	26.3835	0.00	0.19
TPVV, SR319 Pasture --> TPVV	4.8244	11.9214	0.00	0.09
Residential-Medium Density --> URMD	3.6381	8.9899	0.00	0.06
SOIL:				
Mantachie	325.7683	804.9897	0.04	5.80
Ruston	47.6117	117.6508	0.01	0.85
RENTZEL	73.3157	181.1667	0.01	1.31
ATTOYAC	129.6271	320.3152	0.01	2.31
MARIETTA	195.8248	483.8928	0.02	3.49
BERNALDO	132.7907	328.1325	0.01	2.36
Briley	191.6330	473.5348	0.02	3.41
PITS	15.8969	39.2821	0.00	0.28
KULLIT	17.5578	43.3862	0.00	0.31
OSIER	8.2253	20.3251	0.00	0.15
WATER	31.9520	78.9550	0.00	0.57
KIRVIN	868.5572	2146.2483	0.10	15.47
LILBERT	427.1606	1055.5352	0.05	7.61
Sacul	655.4910	1619.7510	0.07	11.67
TENAHA	306.8660	758.2811	0.03	5.47
CUTHBERT	1110.3328	2743.6879	0.12	19.77
MOLLVILLE	3.9545	9.7717	0.00	0.07

Table11-40

DARCO	76.4001	188.7886	0.01	1.36
BOWIE	265.8978	657.0467	0.03	4.74
NACOGDOCHES	80.1964	198.1693	0.01	1.43
ALTO	2.2936	5.6676	0.00	0.04
WODEN	27.4439	67.8153	0.00	0.49
BIENVILLE	24.4386	60.3889	0.00	0.44
Iuka	342.5352	846.4215	0.04	6.10
BETIS	23.8058	58.8254	0.00	0.42
TRAWICK	229.4377	566.9520	0.03	4.09
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		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	33	7170.3792	17718.3655	0.80
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LANDUSE:				
Residential-High Density --> URHD	0.3953	0.9768	0.00	0.01
Range-Brush --> RNGB	578.4183	1429.3006	0.06	8.07
SR319 - Poultry Headquarters --> TBHO	55.6597	137.5380	0.01	0.78
Pasture --> PAST	1574.1264	3889.7452	0.18	21.95
Range-Grasses --> RNGE	7.3528	18.1691	0.00	0.10
TPLH, SR319 Pastureland --> TPLH	24.1930	59.7821	0.00	0.34
Water --> WATR	46.0141	113.7032	0.01	0.64
Wetlands-Forested --> WETF	1902.4714	4701.1018	0.21	26.53
TPLL --> TPLL	8.0643	19.9274	0.00	0.11
SR319 Pasture, no litter --> TBPA	7.5109	18.5598	0.00	0.10
Wetlands-Mixed --> WETL	6.4831	16.0200	0.00	0.09
TPMH, SR319 Pasture --> TPMH	34.3130	84.7890	0.00	0.48
TPMV, SR319 Pasture --> TPMV	10.5153	25.9837	0.00	0.15
TPHH, SR319 Pasture --> TPHH	13.7568	33.9938	0.00	0.19
Forest-Deciduous --> FRSD	201.2130	497.2075	0.02	2.81
Forest-Evergreen --> FRSE	1818.5865	4493.8181	0.20	25.36
TPHV, SR319 Pasture --> TPHV	57.2410	141.4453	0.01	0.80
Forest-Mixed --> FRST	325.0243	803.1513	0.04	4.53
Residential-Low Density --> URLD	356.0166	879.7349	0.04	4.97
TPVH, SR319 Pasture --> TPVH	59.0594	145.9387	0.01	0.82
TPVM, SR319 Pasture --> TPVM	36.7639	90.8454	0.00	0.51
TPVV, SR319 Pasture --> TPVV	13.0452	32.2355	0.00	0.18
Residential-Medium Density --> URMD	13.5987	33.6030	0.00	0.19
SR 319 Hayland - no litter --> TBHA	20.5561	50.7953	0.00	0.29

SOIL:

Table11-41

MANTACHIE	3.1625	7.8147	0.00	0.04
RUSTON	38.4242	94.9481	0.00	0.54
RENTZEL	11.0687	27.3513	0.00	0.15
MARIETTA	647.2814	1599.4648	0.07	9.03
BERNALDO	139.7027	345.2124	0.02	1.95
Kawah	8.3015	20.5135	0.00	0.12
BRILEY	27.5136	67.9875	0.00	0.38
KULLIT	345.9758	854.9234	0.04	4.83
WATER	28.5414	70.5273	0.00	0.40
OSIER	157.2545	388.5838	0.02	2.19
KIRVIN	184.6100	456.1806	0.02	2.57
LILBERT	49.8091	123.0808	0.01	0.69
SACUL	1644.9661	4064.7935	0.18	22.94
TENAHA	12.0965	29.8911	0.00	0.17
CUTHBERT	1855.9828	4586.2264	0.21	25.88
MOLLVILLE	2.4509	6.0564	0.00	0.03
DARCO	330.6377	817.0223	0.04	4.61
BOWIE	268.0205	662.2921	0.03	3.74
IUKA	302.0172	746.2997	0.03	4.21
TONKAWA	1104.1813	2728.4872	0.12	15.40
Betis	8.3806	20.7088	0.00	0.12

SUBBASIN #	34	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		14591.8432	36057.1741	1.63	
LANDUSE:					
SR319 - Poultry Headquarters	--> TBHQ	1909.9838	4719.6655	0.21	13.09
Pasture	--> PAST	184.6969	456.3952	0.02	1.27
Range-Grasses	--> RNGE	2888.1815	7136.8408	0.32	19.79
TPLH, SR319 Pastureland	--> TPLH	5.4555	13.4809	0.00	0.04
Water	--> WATR	7.6693	18.9513	0.00	0.05
Wetlands-Forested	--> WETF	69.1032	170.7574	0.01	0.47
SR319 Pasture, no litter	--> TBPA	3220.7307	7958.5866	0.36	22.07
Wetlands-Mixed	--> WETL	137.3367	339.3658	0.02	0.94
TPMH, SR319 Pasture	--> TPMH	10.1994	25.2033	0.00	0.07
TPSS, SR319 Pasture	--> TPSS	59.6153	147.3125	0.01	0.41
TPMV, SR319 Pasture	--> TPMV	45.2254	111.7543	0.01	0.31
TPHH, SR319 Pasture	--> TPHH	4.2695	10.5502	0.00	0.03
Forest-Deciduous	--> FRSD	109.7428	271.1800	0.01	0.75
		699.1757	1727.6981	0.08	4.79

Table11-42

Forest-Evergreen --> FRSE	3434.1283	8485.9028	0.38	23.53
TPHM, SR319 Pasture --> TPHM	28.1473	69.5534	0.00	0.19
TPHV, SR319 Pasture --> TPHV	3.0836	7.6196	0.00	0.02
Forest-Mixed --> FRST	922.3774	2279.2407	0.10	6.32
Residential-Low Density --> URLD	633.4723	1565.3417	0.07	4.34
TPVH, SR319 Pasture --> TPVH	65.3081	161.3795	0.01	0.45
TPVL, SR319 Pasture --> TPVL	16.8409	41.6148	0.00	0.12
TPVM, SR319 Pasture --> TPVM	74.7959	184.8244	0.01	0.51
TPVV, SR319 Pasture --> TPVV	18.1851	44.9362	0.00	0.12
Residential-Medium Density --> URMD	24.2731	59.9800	0.00	0.17
SR 319 Hayland - no litter --> TBHA	19.8454	49.0390	0.00	0.14

SOIL:

MANTACHIE	520.9622	1287.3236	0.06	3.57
RUSTON	70.1310	173.2973	0.01	0.48
RENTZEL	51.9460	128.3611	0.01	0.36
ATTOYAC	78.1957	193.2255	0.01	0.54
MARIETTA	466.6442	1153.1012	0.05	3.20
BERNALDO	32.9703	81.4712	0.00	0.23
Kawah	0.8697	2.1491	0.00	0.01
BRILEY	608.3295	1503.2126	0.07	4.17
PERCILLA	30.6774	75.8054	0.00	0.21
Naconiche	12.0179	29.6969	0.00	0.08
KULLIT	47.8346	118.2017	0.01	0.33
OSIER	342.6696	846.7538	0.04	2.35
KIRVIN	783.8548	1936.9443	0.09	5.37
WATER	29.5705	73.0701	0.00	0.20
LACERDA	140.0249	346.0085	0.02	0.96
LILBERT	570.9315	1410.8004	0.06	3.91
SACUL	961.3567	2375.5604	0.11	6.59
TENAHA	564.4482	1394.7797	0.06	3.87
CUTHBERT	1743.8673	4309.1834	0.20	11.95
MOLLVILLE	1.9766	4.8844	0.00	0.01
DARCO	2712.8934	6703.6952	0.30	18.59
BOWIE	202.3285	499.9637	0.02	1.39
NACOGDOCHES	1207.8037	2984.5432	0.14	8.28
WODEN	190.9430	471.8298	0.02	1.31
ALTO	130.5370	322.5636	0.01	0.89
HANNAHATCHEE	360.6965	891.2992	0.04	2.47
IUKA	211.5791	522.8226	0.02	1.45
TUSCOSO	67.2847	166.2638	0.01	0.46
TONKAWA	2119.2701	5236.8223	0.24	14.52

Table11-43

Betis	5.2974	13.0901	0.00	0.04
TRAWICK	323.9311	800.4500	0.04	2.22
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SUBBASIN #	35	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
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LANDUSE:				
Range-Brush --> RNGB	198.3537	490.1419	0.02	7.68
SR319 - Poultry Headquarters --> TBHQ	12.5700	31.0612	0.00	0.49
Pasture --> PAST	667.8724	1650.3462	0.07	25.84
Water --> WATR	5.3759	13.2840	0.00	0.21
Wetlands-Forested --> WETF	665.1845	1643.7042	0.07	25.74
SR319 Pasture, no litter --> TBPA	9.6449	23.8331	0.00	0.37
Wetlands-Mixed --> WETL	2.5298	6.2513	0.00	0.10
TPHH, SR319 Pasture --> TPHH	8.3010	20.5121	0.00	0.32
Forest-Deciduous --> FRSD	144.4369	356.9108	0.02	5.59
Forest-Evergreen --> FRSE	708.1124	1749.7811	0.08	27.40
Forest-Mixed --> FRST	68.0680	168.1993	0.01	2.63
Residential-Low Density --> URLD	80.0056	197.6977	0.01	3.10
TPVH, SR319 Pasture --> TPVH	13.7559	33.9915	0.00	0.53
SOIL:				
MANTACHIE	224.6796	555.1946	0.03	8.69
RUSTON	9.4868	23.4424	0.00	0.37
RENTZEL	5.6921	14.0655	0.00	0.22
ATTOYAC	15.0208	37.1172	0.00	0.58
MARIETTA	287.7670	711.0867	0.03	11.14
BERNALDO	41.3467	102.1699	0.00	1.60
BRILEY	16.4438	40.6335	0.00	0.64
WATER	1.0277	2.5396	0.00	0.04
KIRVIN	196.8516	486.4302	0.02	7.62
LILBERT	64.0361	158.2363	0.01	2.48
SACUL	221.5174	547.3805	0.02	8.57
TENAHA	25.6144	63.2945	0.00	0.99
CUTHBERT	848.2802	2096.1429	0.09	32.83
DARCO	239.5423	591.9210	0.03	9.27
BOWIE	54.9445	135.7707	0.01	2.13
NACOGDOCHES	28.3814	70.1319	0.00	1.10
WODEN	81.8239	202.1909	0.01	3.17
IUKA	181.5936	448.7269	0.02	7.03
TONKAWA	4.9806	12.3073	0.00	0.19

Table11-44

	TRAWICK	35.1803	86.9323	0.00	1.36
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
<hr/>					
SUBBASIN #	36	5119.4068	12650.3102	0.57	
<hr/>					
LANDUSE:					
Range-Brush --> RNGB	366.6658	906.0495	0.04	7.16	
SR319 - Poultry Headquarters --> TBHQ	29.4882	72.8668	0.00	0.58	
Pasture --> PAST	999.6741	2470.2448	0.11	19.53	
Water --> WATR	9.9612	24.6145	0.00	0.19	
Wetlands-Forested --> WETF	1080.7865	2670.6775	0.12	21.11	
SR319 Pasture, no litter --> TBPA	27.1165	67.0062	0.00	0.53	
Wetlands-Mixed --> WETL	1.5021	3.7117	0.00	0.03	
TPMH, SR319 Pasture --> TPMH	11.3842	28.1309	0.00	0.22	
TPMV, SR319 Pasture --> TPMV	7.1942	17.7772	0.00	0.14	
TPHH, SR319 Pasture --> TPHH	55.1817	136.3567	0.01	1.08	
Forest-Deciduous --> FRSD	210.2122	519.4449	0.02	4.11	
Forest-Evergreen --> FRSE	1742.9669	4306.9582	0.19	34.05	
TPHM, SR319 Pasture --> TPHM	0.0791	0.1954	0.00	0.00	
Forest-Mixed --> FRST	416.8669	1030.0989	0.05	8.14	
TPVH, SR319 Pasture --> TPVH	11.6214	28.7170	0.00	0.23	
Residential-Low Density --> URLD	138.1124	341.2825	0.02	2.70	
Agricultural Land-Row Crops --> AGRR	9.8821	24.4192	0.00	0.19	
Residential-Medium Density --> URMD	0.7115	1.7582	0.00	0.01	
<hr/>					
SOIL:					
MANTACHIE	127.8350	315.8866	0.01	2.50	
RUSTON	25.2982	62.5131	0.00	0.49	
RENTZEL	63.4827	156.8688	0.01	1.24	
ATTOYAC	36.7614	90.8394	0.00	0.72	
MARIETTA	284.2885	702.4911	0.03	5.55	
BERNALDO	101.2719	250.2478	0.01	1.98	
CHIRENO	19.9223	49.2291	0.00	0.39	
BRILEY	74.0763	183.0462	0.01	1.45	
PERCILLA	9.8821	24.4192	0.00	0.19	
KULLIT	86.1720	212.9353	0.01	1.68	
WATER	4.6644	11.5259	0.00	0.09	
OSIER	20.4757	50.5966	0.00	0.40	
KIRVIN	289.7434	715.9705	0.03	5.66	
LACERDA	10.6727	26.3727	0.00	0.21	
LILBERT	356.7837	881.6303	0.04	6.97	

Table11-45

SACUL	682.2608	1685.9006	0.08	13.33
TENAHA	22.9265	56.6525	0.00	0.45
CUTHBERT	327.6907	809.7402	0.04	6.40
MOLLVILLE	1.8974	4.6885	0.00	0.04
DARCO	764.3218	1888.6775	0.09	14.93
BOWIE	237.8821	587.8186	0.03	4.65
NACOGDOCHES	801.4786	1980.4936	0.09	15.66
WODEN	8.8544	21.8796	0.00	0.17
ALTO	113.8419	281.3090	0.01	2.22
HANNAHATCHEE	44.0347	108.8119	0.00	0.86
IUKA	348.2455	860.5321	0.04	6.80
TONKAWA	63.3246	156.4781	0.01	1.24
TRAWICK	191.3176	472.7554	0.02	3.74

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	37	18049.1584	44600.3729	2.02	

LANDUSE:

Residential-High Density --> URHD	9.0128	22.2710	0.00	0.05
Range-Brush --> RNGB	1458.0906	3603.0148	0.16	8.08
SR319 - Poultry Headquarters --> TBHQ	140.1721	346.3723	0.02	0.78
Pasture --> PAST	5018.2098	12400.2473	0.56	27.80
Range-Grasses --> RNGE	2.3718	5.8608	0.00	0.01
TPLH, SR319 Pastureland --> TPLH	42.4548	104.9080	0.00	0.24
Water --> WATR	186.5009	460.8530	0.02	1.03
Wetlands-Forested --> WETF	4581.4862	11321.0816	0.51	25.38
TPLL --> TPLL	0.0791	0.1954	0.00	0.00
SR319 Pasture, no litter --> TBPA	203.0243	501.6831	0.02	1.12
Wetlands-Mixed --> WETL	16.9187	41.8069	0.00	0.09
TPMH, SR319 Pasture --> TPMH	19.9229	49.2306	0.00	0.11
TPMM, SR319 Pasture --> TPMM	7.9850	19.7313	0.00	0.04
TPSS, SR319 Pasture --> TPSS	32.0981	79.3159	0.00	0.18
TPMV, SR319 Pasture --> TPMV	70.2047	173.4792	0.01	0.39
TPHH, SR319 Pasture --> TPHH	68.7816	169.9627	0.01	0.38
Forest-Deciduous --> FRSD	690.8201	1707.0511	0.08	3.83
Forest-Evergreen --> FRSE	3496.6346	8640.3589	0.39	19.37
TPHM, SR319 Pasture --> TPHM	71.5487	176.8003	0.01	0.40
TPHV, SR319 Pasture --> TPHV	86.4118	213.5279	0.01	0.48
Forest-Mixed --> FRST	870.7591	2151.6893	0.10	4.82
Residential-Low Density --> URLD	859.6117	2124.1436	0.10	4.76

Table11-46

TPVH, SR319 Pasture --> TPVH	54.0766	133.6259	0.01	0.30
TPVM, SR319 Pasture --> TPVM	2.9252	7.2283	0.00	0.02
TPVV, SR319 Pasture --> TPVV	8.3803	20.7081	0.00	0.05
Residential-Medium Density --> URMD	47.6728	117.8018	0.01	0.26
SR 319 Hayland - no litter --> TBHA	3.0043	7.4237	0.00	0.02

SOIL:

MANTACHIE	284.3763	702.7080	0.03	1.58
LANEVILLE	1990.1597	4917.7841	0.22	11.03
ATTOYAC	14.7841	36.5322	0.00	0.08
Rentzel	12.8867	31.8436	0.00	0.07
MARIETTA	783.7939	1936.7938	0.09	4.34
DREKA	342.3268	845.9065	0.04	1.90
ALAZAN	556.9727	1376.3075	0.06	3.09
BERNALDO	613.8164	1516.7710	0.07	3.40
Pits	9.4871	23.4431	0.00	0.05
Sawlit	101.7493	251.4276	0.01	0.56
AUSTONIO	67.6748	167.2277	0.01	0.37
KULLIT	365.0958	902.1701	0.04	2.02
GUYTON	0.7115	1.7582	0.00	0.00
KIRVIN	657.5362	1624.8048	0.07	3.64
WATER	149.3430	369.0340	0.02	0.83
SAWTOWN	168.7916	417.0925	0.02	0.94
Lilbert	294.8912	728.6908	0.03	1.63
SACUL	2013.9565	4976.5873	0.23	11.16
EASTWOOD	2020.6766	4993.1928	0.23	11.20
TENAHA	208.4794	515.1629	0.02	1.16
Cuthbert	1276.4123	3154.0787	0.14	7.07
MOLLVILLE	47.3565	117.0203	0.01	0.26
LATEX	866.8061	2141.9213	0.10	4.80
DARCO	150.6080	372.1598	0.02	0.83
Bowie	256.6265	634.1369	0.03	1.42
METCALF	1937.5852	4787.8700	0.22	10.74
IUKA	330.6260	816.9933	0.04	1.83
GRAPELAND	15.0213	37.1183	0.00	0.08
MABEN	1820.2612	4497.9566	0.20	10.09
METH	226.7421	560.2910	0.03	1.26
Gallime	76.0550	187.9358	0.01	0.42
OWENTOWN	226.7421	560.2910	0.03	1.26
Iulus	20.2392	50.0120	0.00	0.11
BETIS	93.8434	231.8917	0.01	0.52
BESNER	46.7240	115.4575	0.01	0.26

Table11-47

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	38	443.7462	1096.5190	0.05		
LANDUSE:						
Range-Brush --> RNGB		6.1896	15.2948	0.00	1.39	
Pasture --> PAST		349.7914	864.3519	0.04	78.83	
Range-Grasses --> RNGE		1.1903	2.9413	0.00	0.27	
Water --> WATR		0.3968	0.9804	0.00	0.09	
Wetlands-Forested --> WETF		45.9458	113.5344	0.01	10.35	
Forest-Deciduous --> FRSD		16.9023	41.7666	0.00	3.81	
Forest-Evergreen --> FRSE		6.9038	17.0596	0.00	1.56	
Forest-Mixed --> FRST		1.6664	4.1178	0.00	0.38	
Residential-Low Density --> URLD		14.7598	36.4722	0.00	3.33	
SOIL:						
MANTACHIE		69.9107	172.7527	0.01	15.75	
LANEVILLE		1.1903	2.9413	0.00	0.27	
RENTZEL		6.4277	15.8831	0.00	1.45	
MARIETTA		16.9817	41.9626	0.00	3.83	
DREKA		0.2381	0.5883	0.00	0.05	
BERNALDO		19.6797	48.6296	0.00	4.43	
KIRVIN		44.2000	109.2205	0.00	9.96	
LILBERT		75.0687	185.4984	0.01	16.92	
TENAHA		17.2198	42.5509	0.00	3.88	
CUTHBERT		34.5189	85.2979	0.00	7.78	
DARCO		130.9337	323.5437	0.01	29.51	
WODEN		25.3138	62.5518	0.00	5.70	
TRAWICK		2.0632	5.0983	0.00	0.46	
SUBBASIN #	39	5596.5940	13829.4636	0.63		
LANDUSE:						
Range-Brush --> RNGB		412.1434	1018.4269	0.05	7.36	
SR319 - Poultry Headquarters --> TBHQ		27.1230	67.0223	0.00	0.48	
Pasture --> PAST		1072.2687	2649.6295	0.12	19.16	
Range-Grasses --> RNGE		2.8467	7.0344	0.00	0.05	
TPLH, SR319 Pastureland --> TPLH		8.7774	21.6894	0.00	0.16	

Table11-48

Water --> WATR	204.4902	505.3054	0.02	3.65
Wetlands-Forested --> WETF	1295.1835	3200.4632	0.14	23.14
Wetlands-Mixed --> WETL	24.6717	60.9649	0.00	0.44
TPMH, SR319 Pasture --> TPMH	12.6521	31.2641	0.00	0.23
TPHH, SR319 Pasture --> TPHH	10.5962	26.1837	0.00	0.19
Forest-Deciduous --> FRSD	362.4837	895.7155	0.04	6.48
Forest-Evergreen --> FRSE	1744.8879	4311.7053	0.20	31.18
TPHM, SR319 Pasture --> TPHM	37.0866	91.6428	0.00	0.66
Forest-Mixed --> FRST	176.7345	436.7199	0.02	3.16
Residential-Low Density --> URLD	168.8270	417.1799	0.02	3.02
TPVH, SR319 Pasture --> TPVH	7.2750	17.9768	0.00	0.13
TPVL, SR319 Pasture --> TPVL	10.6752	26.3791	0.00	0.19
TPVM, SR319 Pasture --> TPVM	8.3030	20.5170	0.00	0.15
TPVV, SR319 Pasture --> TPVV	8.8565	21.8848	0.00	0.16
SR 319 Hayland - no litter --> TBHA	0.7117	1.7586	0.00	0.01

SOIL:

LANEVILLE	541.9069	1339.0790	0.06	9.68
RENTZEL	6.9587	17.1952	0.00	0.12
DREKA	145.0251	358.3643	0.02	2.59
ALAZAN	9.1728	22.6664	0.00	0.16
AUSTONIO	17.7130	43.7697	0.00	0.32
KIRVIN	215.4026	532.2707	0.02	3.85
WATER	229.2409	566.4658	0.03	4.10
SAWTOWN	10.4380	25.7929	0.00	0.19
LILBERT	444.4854	1098.3457	0.05	7.94
EASTWOOD	168.3525	416.0075	0.02	3.01
TENAHA	654.6690	1617.7199	0.07	11.70
CUTHBERT	954.5247	2358.6783	0.11	17.06
DARCO	501.1037	1238.2524	0.06	8.95
BOWIE	207.6532	513.1215	0.02	3.71
METCALF	88.8022	219.4347	0.01	1.59
GRAPELAND	63.1816	156.1249	0.01	1.13
MABEN	877.2676	2167.7721	0.10	15.68
METH	43.3336	107.0794	0.00	0.77
GALLIME	20.5597	50.8041	0.00	0.37
OWENTOWN	36.1377	89.2980	0.00	0.65
BESNER	1.0280	2.5402	0.00	0.02
BETIS	359.6370	888.6810	0.04	6.43

Area [ha]

Area [acres] %Wat.Area %Sub.Area

Table11-49

SUBBASIN #	40	94.4730	233.4475	0.01
LANDUSE:				
Pasture ---> PAST	72.9454	180.2518	0.01	77.21
Wetlands-Forested ---> WETF	14.9037	36.8278	0.00	15.78
Wetlands-Mixed ---> WETL	0.4140	1.0230	0.00	0.44
Forest-Mixed ---> FRST	0.8280	2.0460	0.00	0.88
Residential-Low Density ---> URLD	5.3819	13.2989	0.00	5.70
SOIL:				
MANTACHIE	74.4358	183.9345	0.01	78.79
ATTOYAC	5.0507	12.4805	0.00	5.35
MARIETTA	12.0058	29.6669	0.00	12.71
TRAWICK	2.9807	7.3656	0.00	3.16

		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	41	5588.2140	13808.7562	0.62
LANDUSE:				
Residential-High Density ---> URHD	2.2926	5.6653	0.00	0.04
Range-Brush ---> RNGB	433.7060	1071.7092	0.05	7.76
SR319 - Poultry Headquarters ---> TBHQ	17.8669	44.1499	0.00	0.32
Pasture ---> PAST	1506.3496	3722.2652	0.17	26.96
Range-Grasses ---> RNGE	1.4230	3.5164	0.00	0.03
Water ---> WATR	8.6963	21.4889	0.00	0.16
Wetlands-Forested ---> WETF	1367.0514	3378.0524	0.15	24.46
SR319 Pasture, no litter ---> TBPA	18.8155	46.4941	0.00	0.34
Wetlands-Mixed ---> WETL	3.2413	8.0095	0.00	0.06
TPMH, SR319 Pasture ---> TPMH	4.1900	10.3537	0.00	0.07
TPMM, SR319 Pasture ---> TPMM	2.1345	5.2745	0.00	0.04
TPSS, SR319 Pasture ---> TPSS	0.4743	1.1721	0.00	0.01
TPMV, SR319 Pasture ---> TPMV	4.2691	10.5491	0.00	0.08
TPHH, SR319 Pasture ---> TPHH	46.8807	115.8446	0.01	0.84
Forest-Deciduous ---> FRSD	273.2996	675.3370	0.03	4.89
Forest-Evergreen ---> FRSE	1376.7754	3402.0809	0.15	24.64
Forest-Mixed ---> FRST	274.6436	678.6580	0.03	4.91
Residential-Low Density ---> URLD	209.2635	517.1007	0.02	3.74
TPVH, SR319 Pasture ---> TPVH	35.3384	87.3230	0.00	0.63
Residential-Medium Density ---> URMD	1.5021	3.7117	0.00	0.03
SOIL:				

Table11-50

MANTACHIE	50.7545	125.4169	0.01	0.91
RUSTON	23.3218	57.6293	0.00	0.42
RENTZEL	14.7836	36.5311	0.00	0.26
ATTOYAC	173.5298	428.8009	0.02	3.11
MARIETTA	129.8114	320.7704	0.01	2.32
BERNALDO	3.3204	8.2048	0.00	0.06
CHIRENO	5.8502	14.4562	0.00	0.10
BRILEY	46.5645	115.0632	0.01	0.83
PERCILLA	18.7365	46.2988	0.00	0.34
KULLIT	99.5326	245.9500	0.01	1.78
WATER	0.7906	1.9535	0.00	0.01
OSIER	83.9584	207.4654	0.01	1.50
KIRVIN	139.6144	344.9942	0.02	2.50
LACERDA	80.7961	199.6513	0.01	1.45
LILBERT	444.2996	1097.8866	0.05	7.95
SACUL	381.6075	942.9713	0.04	6.83
TENAHA	112.6560	278.3787	0.01	2.02
CUTHBERT	107.2802	265.0947	0.01	1.92
BOWIE	32.4133	80.0949	0.00	0.58
MOLLVILLE	6.5617	16.2143	0.00	0.12
DARCO	618.3828	1528.0549	0.07	11.07
NACOGDOCHES	1087.4273	2687.0871	0.12	19.46
ALTO	54.7074	135.1846	0.01	0.98
HANNAHATCHEE	35.1013	86.7369	0.00	0.63
TUSCOSO	557.5881	1377.8281	0.06	9.98
TONKAWA	160.5645	396.7629	0.02	2.87
BETIS	18.2621	45.1267	0.00	0.33
TRAWICK	1099.9973	2718.1483	0.12	19.68

SUBBASIN #	42	Area [ha]	Area [acres]		
			%Wat.	Area	%Sub.Area
SUBBASIN #	42	7966.7192	19686.1615	0.89	
LANDUSE:					
SR319 - Poultry Headquarters	Range-Brush --> RNGB	856.2428	2115.8188	0.10	10.75
	Headquarters --> TBHQ	9.4093	23.2508	0.00	0.12
	Pasture --> PAST	1437.7985	3552.8719	0.16	18.05
	Water --> WATR	51.5533	127.3907	0.01	0.65
	Wetlands-Forested --> WETF	650.5832	1607.6237	0.07	8.17
	Wetlands-Mixed --> WETL	0.4744	1.1723	0.00	0.01
TPHH, SR319 Pasture	Pasture --> TPHH	11.6232	28.7215	0.00	0.15
	Forest-Deciduous --> FRSD	1147.2974	2835.0292	0.13	14.40

Table11-51

Forest-Evergreen --> FRSE	1856.6292	4587.8236	0.21	23.30
Forest-Mixed --> FRST	1574.1142	3889.7148	0.18	19.76
Residential-Low Density --> URLD	313.2731	774.1134	0.04	3.93
TPVL, SR319 Pasture --> TPVL	46.4928	114.8861	0.01	0.58
Agricultural Land-Row Crops --> AGRR	9.0139	22.2738	0.00	0.11
TPVV, SR319 Pasture --> TPVV	2.2139	5.4708	0.00	0.03

SOIL:

RUSTON	60.0928	148.4922	0.01	0.75
RENTZEL	6.8000	16.8031	0.00	0.09
ATTOYAC	101.1298	249.8968	0.01	1.27
BERNALDO	142.0878	351.1060	0.02	1.78
CHIRENO	5.8511	14.4585	0.00	0.07
BRILEY	187.1573	462.4751	0.02	2.35
PERCILLA	3.4000	8.4015	0.00	0.04
PITS	33.2882	82.2569	0.00	0.42
KULLIT	123.3483	304.7998	0.01	1.55
KIRVIN	610.7323	1509.1499	0.07	7.67
WATER	83.7345	206.9122	0.01	1.05
LILBERT	132.9157	328.4414	0.01	1.67
SACUL	427.5284	1056.4440	0.05	5.37
TENAHA	21.3487	52.7538	0.00	0.27
CUTHBERT	976.2702	2412.4125	0.11	12.25
MOLLVILLE	42.4603	104.9215	0.00	0.53
DARCO	368.7798	911.2733	0.04	4.63
BOWIE	198.6224	490.8059	0.02	2.49
NACOGDOCHES	1559.7235	3854.1548	0.17	19.58
WODEN	3.8744	9.5738	0.00	0.05
ALTO	295.0871	729.1750	0.03	3.70
HANNAHATCHEE	734.1596	1814.1452	0.08	9.22
IUKA	44.8324	110.7830	0.01	0.56
TUSCOSSO	112.7530	278.6183	0.01	1.42
BETIS	7.7488	19.1477	0.00	0.10
TRAWICK	1682.9928	4158.7593	0.19	21.13

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	43	10732.0496	26519.4312	1.20	
LANDUSE:					
Range-Brush --> RNGB		821.7474	2030.5789	0.09	7.66

Table11-52

SR319 - Poultry Headquarters --> TBHQ	64.8290	160.1958	0.01	0.60
Pasture --> PAST	2319.4560	5731.4917	0.26	21.61
TPLH, SR319 Pastureland --> TPLH	29.8055	73.6510	0.00	0.28
Water --> WATR	39.7671	98.2664	0.00	0.37
Wetlands-Forested --> WETF	578.8757	1430.4309	0.06	5.39
SR319 Pasture, no litter --> TBPA	63.0106	155.7025	0.01	0.59
Wetlands-Mixed --> WETL	1.8974	4.6887	0.00	0.02
TPMH, SR319 Pasture --> TPMH	137.0897	338.7554	0.02	1.28
TPML, SR319 Pasture --> TPML	11.3055	27.9366	0.00	0.11
TPSS, SR319 Pasture --> TPSS	12.0171	29.6948	0.00	0.11
TPMV, SR319 Pasture --> TPMV	36.7628	90.8427	0.00	0.34
TPHH, SR319 Pasture --> TPHH	43.0085	106.2762	0.00	0.40
Forest-Deciduous --> FRSD	836.2944	2066.5253	0.09	7.79
Forest-Evergreen --> FRSE	3355.0601	8290.5213	0.38	31.26
Forest-Mixed --> FRST	1822.9605	4504.6266	0.20	16.99
Residential-Low Density --> URLD	405.1023	1001.0281	0.05	3.77
TPVH, SR319 Pasture --> TPVH	94.7136	234.0421	0.01	0.88
Agricultural Land-Row Crops --> AGRR	9.4081	23.2479	0.00	0.09
TPVV, SR319 Pasture --> TPVV	36.6837	90.6474	0.00	0.34
Residential-Medium Density --> URMD	5.7714	14.2613	0.00	0.05
SR 319 Hayland - no litter --> TBHA	6.4829	16.0196	0.00	0.06

SOIL:

RUSTON	44.9060	110.9649	0.01	0.42
RENTZEL	3.0833	7.6191	0.00	0.03
ATTOYAC	104.5170	258.2668	0.01	0.97
MARIETTA	137.1687	338.9508	0.02	1.28
BERNALDO	219.5490	542.5166	0.02	2.05
BRILEY	15.5748	38.4861	0.00	0.15
PERCILLA	10.0406	24.8108	0.00	0.09
KULLIT	327.3866	808.9886	0.04	3.05
WATER	57.6346	142.4179	0.01	0.54
KIRVIN	1279.8198	3162.4987	0.14	11.93
LACERDA	199.4678	492.8950	0.02	1.86
LILBERT	307.7797	760.5391	0.03	2.87
SACUL	1838.7725	4543.6987	0.21	17.13
TENAHA	31.3867	77.5582	0.00	0.29
CUTHBERT	1055.0528	2607.0883	0.12	9.83
DARCO	199.4678	492.8950	0.02	1.86
BOWIE	150.7670	372.5528	0.02	1.40
NACOGDOCHES	1981.0010	4895.1526	0.22	18.46
ALTO	240.1046	593.3104	0.03	2.24

Table11-53

HANNAHATCHEE	377.5105	932.8473	0.04	3.52
IUKA	113.4508	280.3426	0.01	1.06
TUSCOSSO	648.1321	1601.5669	0.07	6.04
BETIS	310.2306	766.5953	0.03	2.89
TRAWICK	1079.2451	2666.8687	0.12	10.06
<hr/>				
SUBBASIN #	44	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:		6619.9852	16358.3144	0.74
Range-Brush --> RRGB	389.0621	961.3919	0.04	5.88
SR319 - Poultry Headquarters --> TBHQ	5.7715	14.2617	0.00	0.09
Pasture --> PAST	1849.6459	4570.5676	0.21	27.94
Water --> WATR	24.8253	61.3447	0.00	0.38
Wetlands-Forested --> WETF	993.2508	2454.3723	0.11	15.00
Wetlands-Mixed --> WETL	5.2181	12.8941	0.00	0.08
Forest-Deciduous --> FRSD	596.8360	1474.8115	0.07	9.02
Forest-Evergreen --> FRSE	1479.9539	3657.0402	0.17	22.36
Forest-Mixed --> FRST	989.3768	2444.7994	0.11	14.95
Residential-Low Density --> URLD	249.2812	615.9863	0.03	3.77
Agricultural Land-Row Crops --> AGRR	35.8149	88.5004	0.00	0.54
Residential-Medium Density --> URMD	0.9487	2.3444	0.00	0.01
SOIL:				
Ochlockonee	9.1711	22.6624	0.00	0.14
Mantachie	73.7645	182.2757	0.01	1.11
Ruston	114.7974	283.6702	0.01	1.73
Attoyac	173.6983	429.2172	0.02	2.62
MARIETTA	740.1746	1829.0085	0.08	11.18
Alazan	90.2883	223.1070	0.01	1.36
Woodtell	34.7871	85.9607	0.00	0.53
Briley	1.2650	3.1258	0.00	0.02
Percilla	41.7445	103.1528	0.00	0.63
Water	55.1850	136.3649	0.01	0.83
Lilbert	381.5512	942.8322	0.04	5.76
Sacul	282.8033	698.8211	0.03	4.27
Elrose	534.6935	1321.2545	0.06	8.08
Cuthbert	67.1233	165.8650	0.01	1.01
Tenaha	35.0243	86.5468	0.00	0.53
Darco	121.5177	300.2762	0.01	1.84

Table11-54

Bowie	293.9510	726.3676	0.03	4.44
MOLLVILLE	79.1407	195.5605	0.01	1.20
Nacogdoches	1211.7770	2994.3616	0.14	18.30
Angelina	3.0834	7.6192	0.00	0.05
Alto	207.9320	513.8103	0.02	3.14
Hannahatchee	131.2422	324.3061	0.01	1.98
Bienville	153.3004	378.8130	0.02	2.32
Iuka	281.6174	695.8907	0.03	4.25
Bub	661.9036	1635.5970	0.07	10.00
Trawick	521.4903	1288.6285	0.06	7.88
Betis	316.9579	783.2189	0.04	4.79

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	45	2408.4676	5951.4439	0.27	

LANDUSE:

Range-Brush --> RNGB	276.3361	682.8404	0.03	11.47
SR319 - Poultry Headquarters --> TBHO	11.2338	27.7593	0.00	0.47
Pasture --> PAST	550.8527	1361.1846	0.06	22.87
Water --> WATR	3.4018	8.4060	0.00	0.14
Wetlands-Forested --> WETF	227.9991	563.3971	0.03	9.47
SR319 Pasture, no litter --> TBPA	55.4571	137.0373	0.01	2.30
Wetlands-Mixed --> WETL	0.5538	1.3684	0.00	0.02
TPSS, SR319 Pasture --> TPSS	22.0721	54.5412	0.00	0.92
TPMV, SR319 Pasture --> TPMV	29.4294	72.7216	0.00	1.22
TPHH, SR319 Pasture --> TPHH	0.7911	1.9549	0.00	0.03
Forest-Deciduous --> FRSD	184.9625	457.0515	0.02	7.68
Forest-Evergreen --> FRSE	441.2043	1090.2379	0.05	18.32
TPHV, SR319 Pasture --> TPHV	9.8889	24.4360	0.00	0.41
Forest-Mixed --> FRST	480.9973	1188.5685	0.05	19.97
Residential-Low Density --> URLD	95.8830	236.9317	0.01	3.98
TPVH, SR319 Pasture --> TPVH	15.1103	37.3383	0.00	0.63
Agricultural Land-Row Crops --> AGRR	2.2942	5.6692	0.00	0.10

SOIL:

MANTACHIE	38.2899	94.6163	0.00	1.59
RUSTON	105.0599	259.6084	0.01	4.36
RENTZEL	14.3983	35.5789	0.00	0.60
ATTOYAC	50.0775	123.7441	0.01	2.08
MARIETTA	267.8712	661.9232	0.03	11.12
BERNALDO	82.1967	203.1123	0.01	3.41

Table11-55

BRILEY	48.9700	121.0072	0.01	2.03
PERCILLA	3.1645	7.8195	0.00	0.13
WATER	1.3449	3.3233	0.00	0.06
KIRVIN	155.1375	383.3524	0.02	6.44
LILBERT	52.7673	130.3907	0.01	2.19
SACUL	135.9925	336.0443	0.02	5.65
TENAHA	51.8180	128.0448	0.01	2.15
CUTHBERT	468.7351	1158.2678	0.05	19.46
MOLLVILLE	0.2373	0.5865	0.00	0.01
DARCO	34.4926	85.2329	0.00	1.43
NACOGDOCHES	434.0052	1072.4485	0.05	18.02
WODEN	18.4330	45.5488	0.00	0.77
ALTO	29.8250	73.6991	0.00	1.24
BIENVILLE	6.1707	15.2481	0.00	0.26
IUKA	5.5378	13.6842	0.00	0.23
HANNAHATCHEE	202.2088	499.6679	0.02	8.40
TRAWICK	201.7341	498.4950	0.02	8.38

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	46	5947.6856	14697.0285	0.67	
LANDUSE:					
SR319 - Poultry	Range-Brush ---> RNGB	424.9476	1050.0669	0.05	7.14
	Headquarters ---> TBHQ	51.7149	127.7901	0.01	0.87
	Pasture ---> PAST	1125.0754	2780.1175	0.13	18.92
TPLH, SR319	Range-Grasses ---> RNGE	6.0888	15.0456	0.00	0.10
Pastureland	---> TPLH	17.0801	42.2059	0.00	0.29
	Water ---> WATR	10.9123	26.9649	0.00	0.18
SR319	Wetlands-Forested ---> WETF	1482.4932	3663.3149	0.17	24.93
Pasture, no litter	---> TBPA	3.5584	8.7929	0.00	0.06
	Wetlands-Mixed ---> WETL	0.3954	0.9770	0.00	0.01
TPMH, SR319	Pasture ---> TPMH	20.7176	51.1942	0.00	0.35
TPMM, SR319	Pasture ---> TPMM	75.8327	187.3863	0.01	1.27
TPSS, SR319	Pasture ---> TPSS	28.0715	69.3662	0.00	0.47
TPMV, SR319	Pasture ---> TPMV	14.7079	36.3440	0.00	0.25
TPHH, SR319	Pasture ---> TPHH	28.7832	71.1247	0.00	0.48
	Forest-Deciduous ---> FRSD	228.9214	565.6762	0.03	3.85
	Forest-Evergreen ---> FRSE	1942.4710	4799.9429	0.22	32.66
TPHM, SR319	Pasture ---> TPHM	31.9462	78.9406	0.00	0.54
	Forest-Mixed ---> FRST	173.8063	429.4840	0.02	2.92

Table11-56

Residential-Low Density --> URLD	241.9687	597.9168	0.03	4.07
TPVH, SR319 Pasture --> TPVH	9.8053	24.2293	0.00	0.16
TPVM, SR319 Pasture --> TPVM	7.6702	18.9536	0.00	0.13
TPVV, SR319 Pasture --> TPVV	1.8187	4.4941	0.00	0.03
Residential-Medium Density --> URMD	0.7907	1.9540	0.00	0.01
SR 319 Hayland - no litter --> TBHA	18.1081	44.7461	0.00	0.30

SOIL:

MANTACHIE	261.5792	646.3754	0.03	4.40
LANEVILLE	78.1258	193.0529	0.01	1.31
RENTZEL	69.9021	172.7315	0.01	1.18
DREKA	142.7299	352.6927	0.02	2.40
ALAZAN	7.0377	17.3904	0.00	0.12
KIRVIN	159.3356	393.7262	0.02	2.68
WATER	902.7963	2230.8548	0.10	15.18
LILBERT	421.0730	1040.4924	0.05	7.08
SACUL	1.8187	4.4941	0.00	0.03
TENAHA	919.0857	2271.1067	0.10	15.45
CUTHBERT	587.5253	1451.8044	0.07	9.88
DARCO	922.5650	2279.7042	0.10	15.51
BOWIE	186.9327	461.9200	0.02	3.14
GRAPELAND	248.5319	614.1348	0.03	4.18
MABEN	175.7041	434.1735	0.02	2.95
METH	10.7542	26.5741	0.00	0.18
OWENTOWN	25.5411	63.1134	0.00	0.43
IULUS	119.9564	296.4182	0.01	2.02
BETIS	706.6909	1746.2687	0.08	11.88

SUBBASIN #	47	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
		13345.1160	32976.4489	1.49	

LANDUSE:

Range-Brush --> RNGB	1336.6067	3302.8220	0.15	10.02
SR319 - Poultry Headquarters --> TBHQ	27.0389	66.8145	0.00	0.20
Pasture --> PAST	2021.9873	4996.4317	0.23	15.15
Range-Grasses --> RNGE	61.9839	153.1653	0.01	0.46
Water --> WATR	21.4256	52.9436	0.00	0.16
Wetlands-Forested --> WETF	3614.3566	8931.2559	0.40	27.08
Wetlands-Mixed --> WETL	8.6967	21.4900	0.00	0.07
TPMH, SR319 Pasture --> TPMH	11.4639	28.3278	0.00	0.09
TPSS, SR319 Pasture --> TPSS	47.8320	118.1952	0.01	0.36

Table11-57

TPMV, SR319 Pasture --> TPMV	23.2440	57.4370	0.00	0.17
TPHH, SR319 Pasture --> TPHH	4.9018	12.1126	0.00	0.04
Forest-Deciduous --> FRSD	411.6711	1017.2598	0.05	3.08
Forest-Evergreen --> FRSE	4555.4207	11256.6723	0.51	34.14
Forest-Mixed --> FRST	679.8463	1679.9341	0.08	5.09
Residential-Low Density --> URLD	485.7513	1200.3158	0.05	3.64
TPVH, SR319 Pasture --> TPVH	5.1390	12.6987	0.00	0.04
TPVM, SR319 Pasture --> TPVM	21.7418	53.7251	0.00	0.16
Agricultural Land-Row Crops --> AGRR	3.4787	8.5960	0.00	0.03
Residential-Medium Density --> URMD	2.5300	6.2516	0.00	0.02

SOIL:

MANTACHIE	854.3341	2111.1023	0.10	6.40
LANEVILLE	36.1309	89.2813	0.00	0.27
HAINESVILLE	3.7159	9.1821	0.00	0.03
ATTOYAC	4.0321	9.9636	0.00	0.03
RENTZEL	154.8016	382.5225	0.02	1.16
DREKA	2.2137	5.4702	0.00	0.02
KIRVIN	256.2370	633.1744	0.03	1.92
WATER	5907.2862	14597.1996	0.66	44.27
LILBERT	332.2147	820.9191	0.04	2.49
SACUL	197.2574	487.4329	0.02	1.48
TENAHA	808.5577	1997.9866	0.09	6.06
CUTHBERT	1790.0220	4423.2340	0.20	13.41
DARCO	1398.3534	3455.4012	0.16	10.48
BOWIE	30.2804	74.8244	0.00	0.23
LATEX	15.7332	38.8774	0.00	0.12
METCALF	41.1908	101.7846	0.00	0.31
GRAPELAND	64.4348	159.2216	0.01	0.48
MABEN	112.1877	277.2214	0.01	0.84
METH	15.1007	37.3145	0.00	0.11
OWENTOWN	236.9461	585.5056	0.03	1.78
IULUS	55.7381	137.7315	0.01	0.42
BETIS	1026.6082	2536.8002	0.11	7.69
BESNER	1.7393	4.2980	0.00	0.01

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	48	12565.1408	31049.0912	1.41	
LANDUSE:					
Range-Brush --> RNGB		710.6422	1756.0324	0.08	5.66

Table11-58

SR319 - Poultry Headquarters --> TBHQ	69.3329	171.3250	0.01	0.55
Pasture --> PAST	2327.7505	5751.9878	0.26	18.53
Range-Grasses --> RNGE	12.2538	30.2798	0.00	0.10
TPLH, SR319 Pastureland --> TPLH	16.1276	39.8521	0.00	0.13
Water --> WATR	15.9695	39.4614	0.00	0.13
Wetlands-Forested --> WETF	4495.4108	11108.3849	0.50	35.78
SR319 Pasture, no litter --> TBPA	18.8155	46.4941	0.00	0.15
Wetlands-Mixed --> WETL	5.7712	14.2608	0.00	0.05
TPMH, SR319 Pasture --> TPMH	66.4868	164.2923	0.01	0.53
TPMM, SR319 Pasture --> TPMM	22.3731	55.2850	0.00	0.18
TPSS, SR319 Pasture --> TPSS	17.9459	44.3452	0.00	0.14
TPMV, SR319 Pasture --> TPMV	35.2594	87.1277	0.00	0.28
TPHH, SR319 Pasture --> TPHH	67.4355	166.6365	0.01	0.54
Forest-Deciduous --> FRSD	186.0999	459.8621	0.02	1.48
Forest-Evergreen --> FRSE	3350.6673	8279.6665	0.37	26.67
TPHM, SR319 Pasture --> TPHM	41.9001	103.5373	0.00	0.33
Forest-Mixed --> FRST	637.1984	1574.5490	0.07	5.07
Residential-Low Density --> URLD	429.8322	1062.1369	0.05	3.42
TPVH, SR319 Pasture --> TPVH	12.0166	29.6937	0.00	0.10
TPVM, SR319 Pasture --> TPVM	18.0250	44.5406	0.00	0.14
Residential-Medium Density --> URMD	0.9487	2.3442	0.00	0.01
SR 319 Hayland - no litter --> TBHA	6.8779	16.9958	0.00	0.05

SOIL:

MANTACHIE	2374.0778	5866.4650	0.27	18.89
LANEVILLE	19.4480	48.0570	0.00	0.15
RUSTON	57.6325	142.4127	0.01	0.46
RENTZEL	77.6338	191.8371	0.01	0.62
ATTOYAC	111.5492	275.6438	0.01	0.89
MARIETTA	201.9112	498.9328	0.02	1.61
DREKA	1.5811	3.9071	0.00	0.01
ALAZAN	4.6644	11.5259	0.00	0.04
WOODTELL	18.1040	44.7359	0.00	0.14
BERNALDO	37.5520	92.7929	0.00	0.30
BRILEY	290.5340	717.9240	0.03	2.31
PERCILLA	42.2164	104.3188	0.00	0.34
AUSTONIO	2.3717	5.8606	0.00	0.02
KULLIT	28.7767	71.1087	0.00	0.23
OSIER	80.7171	199.4559	0.01	0.64
KIRVIN	747.3246	1846.6764	0.08	5.95
WATER	3061.9516	7566.2356	0.34	24.37
LACERDA	11.2261	27.7402	0.00	0.09
LILBERT	813.1790	2009.4059	0.09	6.47

Table11-59

SACUL	97.7933	241.6523	0.01	0.78
TENAHA	877.5313	2168.4236	0.10	6.98
CUTHBERT	1363.9682	3370.4336	0.15	10.86
LATEX	1.5021	3.7117	0.00	0.01
MOLLVILLE	17.7087	43.7592	0.00	0.14
DARCO	344.3717	850.9598	0.04	2.74
BOWIE	431.4133	1066.0439	0.05	3.43
NACOGDOCHES	499.6394	1234.6340	0.06	3.98
WODEN	85.9348	212.3492	0.01	0.68
ALTO	72.8904	180.1159	0.01	0.58
HANNAHATCHEE	12.0166	29.6937	0.00	0.10
METCALF	15.0999	37.3125	0.00	0.12
BIENVILLE	7.3523	18.1679	0.00	0.06
IUKA	48.6990	120.3377	0.01	0.39
MABEN	4.5853	11.3305	0.00	0.04
GRAPELAND	10.9098	26.9588	0.00	0.09
TUSCOSO	118.8225	293.6163	0.01	0.95
GALLIME	5.3759	13.2840	0.00	0.04
OWENTOWN	112.5770	278.1834	0.01	0.90
BETIS	198.2746	489.9465	0.02	1.58
TRAWICK	256.2233	633.1406	0.03	2.04

SUBBASIN #	49	Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
		2094.2956	5175.1091	0.23		
LANDUSE:						
SR319 - Poultry Headquarters	Range-Brush --> RNGB	184.4487	455.7819	0.02	8.81	
	Pasture --> PAST	6.8842	17.0112	0.00	0.33	
	Water --> WATR	205.1804	507.0109	0.02	9.80	
	Wetlands-Forested --> WETF	3.8773	9.5810	0.00	0.19	
SR319 Pasture, no litter	Wetlands-Mixed --> WETL	769.4461	1901.3398	0.09	36.74	
	TPMH, SR319 Pasture --> TPMH	15.1136	37.3464	0.00	0.72	
	Forest-Deciduous --> FRSD	205.1804	507.0109	0.02	9.80	
	Forest-Evergreen --> FRSE	4.1938	10.3631	0.00	0.20	
TPHM, SR319 Pasture --> TPHM	Forest-Mixed --> FRST	26.1124	64.5251	0.00	1.25	
	Residential-Low Density --> URLD	38.6939	95.6145	0.00	1.85	
TPVH, SR319 Pasture --> TPVH	TPVH	699.9712	1729.6639	0.08	33.42	
		4.5103	11.1452	0.00	0.22	
		47.7145	117.9050	0.01	2.28	
		82.2146	203.1563	0.01	3.93	
		5.9346	14.6648	0.00	0.28	

Table11-60

SOIL:

MANTACHIE	876.2697	2165.3062	0.10	41.84
WATER	1218.0259	3009.8030	0.14	58.16

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
	50	11845.0120	29269.6169		1.32	

LANDUSE:

Residential-High Density --> URHD	0.6325	1.5630	0.00	0.01
Range-Brush --> RNGB	662.9582	1638.2030	0.07	5.60
SR319 - Poultry Headquarters --> TBHQ	93.5336	231.1263	0.01	0.79
Pasture --> PAST	4315.6723	10664.2421	0.48	36.43
Range-Grasses --> RNGE	2.9254	7.2288	0.00	0.02
Water --> WATR	38.1092	94.1698	0.00	0.32
Wetlands-Forested --> WETF	2481.3693	6131.5875	0.28	20.95
SR319 Pasture, no litter --> TBPA	93.6918	231.5171	0.01	0.79
Wetlands-Mixed --> WETL	3.3207	8.2057	0.00	0.03
TPMH, SR319 Pasture --> TPMH	0.5535	1.3676	0.00	0.00
TPMM, SR319 Pasture --> TPMM	15.7339	38.8792	0.00	0.13
TPMV, SR319 Pasture --> TPMV	0.0791	0.1954	0.00	0.00
TPHH, SR319 Pasture --> TPHH	38.2674	94.5606	0.00	0.32
Forest-Deciduous --> FRSD	340.6111	841.6671	0.04	2.88
Forest-Evergreen --> FRSE	2158.7849	5334.4655	0.24	18.23
TPHM, SR319 Pasture --> TPHM	35.5792	87.9179	0.00	0.30
TPHV, SR319 Pasture --> TPHV	1.5813	3.9075	0.00	0.01
Forest-Mixed --> FRST	766.1378	1893.1648	0.09	6.47
Residential-Low Density --> URLD	707.2345	1747.6119	0.08	5.97
TPVH, SR319 Pasture --> TPVH	27.2774	67.4037	0.00	0.23
TPVM, SR319 Pasture --> TPVM	8.2227	20.3188	0.00	0.07
Agricultural Land-Row Crops --> AGRR	35.0257	86.5503	0.00	0.30
TPVV, SR319 Pasture --> TPVV	9.3296	23.0540	0.00	0.08
Residential-Medium Density --> URMD	1.9766	4.8843	0.00	0.02
SR 319 Hayland - no litter --> TBHA	6.4042	15.8252	0.00	0.05

SOIL:

RUSTON	60.3264	149.0696	0.01	0.51
RENTZEL	107.1328	264.7305	0.01	0.90
ATTOYAC	136.4658	337.2139	0.02	1.15
BERNALDO	19.2918	47.6710	0.00	0.16
CHIRENO	34.0769	84.2058	0.00	0.29
BRILEY	46.4110	114.6840	0.01	0.39

Table11-61

PERCILLA	22.2172	54.8998	0.00	0.19
KULLIT	11.7016	28.9152	0.00	0.10
KIRVIN	117.3321	289.9336	0.01	0.99
WATER	16.6036	41.0283	0.00	0.14
LACERDA	739.4930	1827.3241	0.08	6.24
SACUL	513.2886	1268.3618	0.06	4.33
LILBERT	946.7218	2339.3968	0.11	7.99
TENAHA	212.7633	525.7489	0.02	1.80
CUTHBERT	257.2768	635.7439	0.03	2.17
DARCO	296.9673	733.8211	0.03	2.51
BOWIE	353.1824	872.7314	0.04	2.98
NACOGDOCHES	3812.1878	9420.1066	0.43	32.18
WODEN	6.6414	16.4113	0.00	0.06
ALTO	750.4039	1854.2855	0.08	6.34
HANNAHATCHEE	387.2593	956.9372	0.04	3.27
IUKA	28.0680	69.3574	0.00	0.24
TUSCOSSO	1309.4710	3235.7683	0.15	11.06
BETIS	62.3821	154.1493	0.01	0.53
TRAWICK	1597.3459	3947.1216	0.18	13.49

		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	51	8758.3152	21642.2348	0.98	
LANDUSE:					
SR319 - Poultry Headquarters	Range-Brush --> RNGB	471.7834	1165.8005	0.05	5.39
	Pasture --> PAST	80.4095	198.6960	0.01	0.92
	Range-Grasses --> RNGE	3980.5492	9836.1361	0.45	45.45
	Water --> WATR	1.8976	4.6890	0.00	0.02
	Wetlands-Forested --> WETF	24.6684	60.9569	0.00	0.28
SR319	Pasture, no litter --> TBPA	1586.0526	3919.2152	0.18	18.11
	Wetlands-Mixed --> WETL	39.1374	96.7104	0.00	0.45
	TPMH, SR319 Pasture --> TPMH	3.1626	7.8150	0.00	0.04
	TPMM, SR319 Pasture --> TPMM	117.9656	291.4990	0.01	1.35
	TPSS, SR319 Pasture --> TPSS	5.4555	13.4808	0.00	0.06
	TPHH, SR319 Pasture --> TPHH	6.4043	15.8253	0.00	0.07
	Forest-Deciduous --> FRSD	75.0331	185.4105	0.01	0.86
	Forest-Evergreen --> FRSE	327.0937	808.2649	0.04	3.73
	Forest-Mixed --> FRST	1169.9312	2890.9585	0.13	13.36
Residential-Low Density	URLD	447.1941	1105.0390	0.05	5.11
TPVH, SR319 Pasture	--> TPVH	308.9086	763.3287	0.03	3.53
		27.1985	67.2089	0.00	0.31

Table11-62

TPVM, SR319 Pasture --> TPVM	54.0808	133.6363	0.01	0.62
Agricultural Land-Row Crops --> AGRR	18.5013	45.7177	0.00	0.21
SR 319 Hayland - no litter --> TBHA	12.8877	31.8461	0.00	0.15

SOIL:

RUSTON	30.2821	74.8285	0.00	0.35
ATTOYAC	30.3611	75.0239	0.00	0.35
RENTZEL	9.8041	24.2265	0.00	0.11
BERNALDO	10.5948	26.1802	0.00	0.12
CHIRENO	100.8084	249.1027	0.01	1.15
BRILEY	21.2686	52.5558	0.00	0.24
PERCILLA	39.9280	98.6642	0.00	0.46
KULLIT	17.4735	43.1778	0.00	0.20
KIRVIN	406.1591	1003.6395	0.05	4.64
WATER	6.7996	16.8022	0.00	0.08
LACERDA	325.9868	805.5296	0.04	3.72
LILBERT	364.4126	900.4817	0.04	4.16
SACUL	508.7861	1257.2358	0.06	5.81
TENAHA	85.0744	210.2231	0.01	0.97
CUTHBERT	42.6953	105.5023	0.00	0.49
DARCO	411.3774	1016.5342	0.05	4.70
BOWIE	112.6682	278.4089	0.01	1.29
MOLLVILLE	15.9712	39.4657	0.00	0.18
NACOGDOCHES	2416.3187	5970.8443	0.27	27.59
ALTO	1552.8451	3837.1579	0.17	17.73
HANNAHATCHEE	98.7527	244.0229	0.01	1.13
TUSCOSSO	919.4519	2272.0117	0.10	10.50
TRAWICK	1230.4953	3040.6155	0.14	14.05

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	52	3313.7478	8188.4365	0.37	
LANDUSE:					
SR319 - Poultry Headquarters --> TBHQ	Range-Brush --> RNGB	257.7403	636.8893	0.03	7.78
Pasture --> PAST	15.1146	37.3490	0.00	0.46	
Water --> WATR	675.6484	1669.5611	0.08	20.39	
Wetlands-Forested --> WETF	7.4386	18.3812	0.00	0.22	
SR319 Pasture, no litter --> TBPA	489.9203	1210.6176	0.05	14.78	
TPMH, SR319 Pasture --> TPMH	4.0358	9.9728	0.00	0.12	
TPML, SR319 Pasture --> TPML	51.6747	127.6907	0.01	1.56	
	19.1505	47.3218	0.00	0.58	

Table11-63

TPMM, SR319 Pasture --> TPMM	12.5823	31.0916	0.00	0.38
TPMV, SR319 Pasture --> TPMV	10.0501	24.8342	0.00	0.30
Forest-Deciduous --> FRSD	194.7495	481.2356	0.02	5.88
Forest-Evergreen --> FRSE	921.5978	2277.3142	0.10	27.81
Forest-Mixed --> FRST	512.5527	1266.5434	0.06	15.47
Residential-Low Density --> URLD	125.1113	309.1563	0.01	3.78
Agricultural Land-Row Crops --> AGRR	16.3808	40.4778	0.00	0.49

SOIL:

MANTACHIE	165.9446	410.0573	0.02	5.01
RUSTON	9.1796	22.6832	0.00	0.28
RENTZEL	35.2148	87.0174	0.00	1.06
ATTOYAC	342.0975	845.3400	0.04	10.32
MARIETTA	83.1701	205.5175	0.01	2.51
BERNALDO	255.6037	631.6095	0.03	7.71
BRILEY	103.1911	254.9904	0.01	3.11
KULLIT	8.7048	21.5099	0.00	0.26
WATER	5.1437	12.7104	0.00	0.16
KIRVIN	205.4326	507.6342	0.02	6.20
LILBERT	148.1394	366.0598	0.02	4.47
SACUL	78.7386	194.5670	0.01	2.38
TENAHA	78.6595	194.3715	0.01	2.37
CUTHBERT	330.2273	816.0083	0.04	9.97
DARCO	94.0115	232.3072	0.01	2.84
BOWIE	27.0639	66.8763	0.00	0.82
MOLLVILLE	118.4640	292.7305	0.01	3.57
NACOGDOCHES	144.1827	356.2825	0.02	4.35
WODEN	8.1508	20.1411	0.00	0.25
ANGELINA	10.1292	25.0297	0.00	0.31
ALTO	2.8488	7.0396	0.00	0.09
HANNAHATCHEE	63.6240	157.2180	0.01	1.92
IUKA	40.3585	99.7278	0.00	1.22
TUSCOSSO	698.5183	1726.0735	0.08	21.08
BETIS	19.2296	47.5174	0.00	0.58
TRAWICK	237.7194	587.4164	0.03	7.17

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	53	30476.4256	75308.7715	3.41	
LANDUSE:					
Range-Brush --> RNGB		2891.1849	7144.2626	0.32	9.49

Table11-64

SR319 - Poultry Headquarters --> TBHQ	105.7808	261.3898	0.01	0.35
Pasture --> PAST	4335.5125	10713.2681	0.48	14.23
TPLH, SR319 Pastureland --> TPLH	8.3802	20.7080	0.00	0.03
Water --> WATR	63.3262	156.4822	0.01	0.21
Wetlands-Forested --> WETF	5118.6702	12648.4900	0.57	16.80
SR319 Pasture, no litter --> TBPA	156.9320	387.7867	0.02	0.51
Wetlands-Mixed --> WETL	5.2969	13.0890	0.00	0.02
TPMH, SR319 Pasture --> TPMH	55.1041	136.1649	0.01	0.18
TPMM, SR319 Pasture --> TPMM	28.2240	69.7430	0.00	0.09
TPMV, SR319 Pasture --> TPMV	27.2753	67.3987	0.00	0.09
TPHH, SR319 Pasture --> TPHH	75.8175	187.3489	0.01	0.25
Forest-Deciduous --> FRSD	1652.4897	4083.3846	0.18	5.42
Forest-Evergreen --> FRSE	9811.8453	24245.5602	1.10	32.19
TPHM, SR319 Pasture --> TPHM	25.9313	64.0776	0.00	0.09
TPHV, SR319 Pasture --> TPHV	9.0127	22.2709	0.00	0.03
Forest-Mixed --> FRST	4493.3932	11103.3991	0.50	14.74
Residential-Low Density --> URLD	12411.1461	3066.9340	0.14	4.07
TPVH, SR319 Pasture --> TPVH	188.0812	464.7580	0.02	0.62
TPVL, SR319 Pasture --> TPVL	6.8781	16.9962	0.00	0.02
TPVM, SR319 Pasture --> TPVM	25.9313	64.0776	0.00	0.09
Agricultural Land-Row Crops --> AGRR	107.2830	265.1016	0.01	0.35
TPVV, SR319 Pasture --> TPVV	24.8245	61.3426	0.00	0.08
Residential-Medium Density --> URMD	9.2499	22.8570	0.00	0.03
SR 319 Hayland - no litter --> TBHA	8.8546	21.8802	0.00	0.03

SOIL:

Ochlockonee	34.7069	85.7624	0.00	0.11
Mantachie	3311.6203	8183.1794	0.37	10.87
RUSTON	652.3943	1612.0988	0.07	2.14
RENTZEL	68.6231	169.5712	0.01	0.23
ATTOYAC	1512.4763	3737.4046	0.17	4.96
Marietta	2071.5020	5118.7850	0.23	6.80
NACLINA	137.2463	339.1425	0.02	0.45
KEITHVILLE	18.7370	46.3000	0.00	0.06
Alazan	49.0165	121.1223	0.01	0.16
Woodtell	1677.9467	4146.2901	0.19	5.51
BERNALDO	1295.3015	3200.7547	0.14	4.25
Briley	305.5628	755.0608	0.03	1.00
Percilla	150.3701	371.5720	0.02	0.49
KIRVIN	1110.9360	2745.1785	0.12	3.65
Water	193.2200	477.4563	0.02	0.63
LaCerda	367.1497	907.2452	0.04	1.20

Table11-65

Lilbert	1725.8564	4264.6774	0.19	5.66
Sacul	2464.0296	6088.7403	0.28	8.09
Elrose	151.5560	374.5024	0.02	0.50
Tenaha	1233.2402	3047.3982	0.14	4.05
CUTHBERT	1576.9884	3896.8172	0.18	5.17
DARCO	1000.6488	2472.6533	0.11	3.28
Bowie	587.7241	1452.2955	0.07	1.93
MOLLVILLE	788.0594	1947.3341	0.09	2.59
NACOGDOCHES	2428.3740	6000.6335	0.27	7.97
Angelina	30.2005	74.6270	0.00	0.10
WODEN	131.3959	324.6859	0.01	0.43
ALTO	941.4337	2326.3297	0.11	3.09
Hannahatchee	769.4805	1901.4249	0.09	2.52
Bienville	256.5462	633.9385	0.03	0.84
Iuka	995.9053	2460.9318	0.11	3.27
TUSCOSO	80.2448	198.2889	0.01	0.26
Bub	297.4197	734.9389	0.03	0.98
Betis	518.0731	1280.1846	0.06	1.70
TRAWICK	1542.4397	3811.4455	0.17	5.06

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	54	5097.8244	12596.9790	0.57	
LANDUSE:					
Residential-High Density --> URHD		1.2651	3.1261	0.00	0.02
Range-Brush --> RNGB		325.0532	803.2228	0.04	6.38
SR319 - Poultry Headquarters --> TBHQ		7.9860	19.7338	0.00	0.16
Pasture --> PAST		1212.2089	2995.4289	0.14	23.78
Water --> WATR		3.2418	8.0107	0.00	0.06
Wetlands-Forested --> WETF		1574.2665	3890.0912	0.18	30.88
Wetlands-Mixed --> WETL		0.7907	1.9538	0.00	0.02
Forest-Deciduous --> FRSD		117.0223	289.1680	0.01	2.30
Forest-Evergreen --> FRSE		1225.3344	3027.8626	0.14	24.04
Forest-Mixed --> FRST		369.1738	912.2469	0.04	7.24
Residential-Low Density --> URLD		259.3468	640.8588	0.03	5.09
Residential-Medium Density --> URMD		2.1349	5.2754	0.00	0.04
SOIL:					
MANTACHIE		16.6045	41.0306	0.00	0.33
RUSTON		40.3253	99.6457	0.00	0.79
RENTZEL		251.7561	622.1020	0.03	4.94

Table11-66

ATTOYAC	69.6599	172.1331	0.01	1.37
BERNALDO	101.9992	252.0451	0.01	2.00
CHIRENO	97.8876	241.8851	0.01	1.92
BRILEY	48.8647	120.7472	0.01	0.96
PERCILLA	1.1860	2.9308	0.00	0.02
WATER	0.4744	1.1723	0.00	0.01
KIRVIN	349.0902	862.6194	0.04	6.85
LILBERT	548.5026	1355.3773	0.06	10.76
SACUL	99.2318	245.2067	0.01	1.95
TENAHA	453.0661	1119.5491	0.05	8.89
CUTHBERT	652.6366	1612.6978	0.07	12.80
MOLLVILLE	1.7395	4.2984	0.00	0.03
DARCO	183.3613	453.0950	0.02	3.60
BOWIE	156.5569	386.8599	0.02	3.07
NACOGDOCHES	713.0455	1761.9710	0.08	13.99
WODEN	21.4277	52.9490	0.00	0.42
ALTO	25.2231	62.3274	0.00	0.49
BIENVILLE	5.0604	12.5046	0.00	0.10
IUKA	74.5622	184.2469	0.01	1.46
HANNAHATCHEE	158.7708	392.3306	0.02	3.11
TUSCOSSO	364.1924	899.9377	0.04	7.14
BETIS	7.8278	19.3430	0.00	0.15
TRAWICK	654.7715	1617.9732	0.07	12.84

SUBBASIN #	55	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		5529.4748	13663.6087	0.62	
LANDUSE:					
SR319 - Poultry Headquarters	Range-Brush --> RNGB	307.7818	760.5441	0.03	5.57
	Pasture --> PAST	42.2290	104.3501	0.00	0.76
	Range-Grasses --> RNGE	2027.3107	5009.5860	0.23	36.66
	Water --> WATR	1.1071	2.7358	0.00	0.02
	Wetlands-Forested --> WETF	7.5917	18.7596	0.00	0.14
SR319 Pasture, no litter	Wetlands-Mixed --> WETL	1586.9898	3921.5311	0.18	28.70
	Pasture --> TBHQ	80.5831	199.1250	0.01	1.46
	TPMH, SR319 Pasture --> TPMH	4.3494	10.7477	0.00	0.08
	TPSS, SR319 Pasture --> TPSS	0.1582	0.3908	0.00	0.00
	TPMV, SR319 Pasture --> TPMV	32.3440	79.9236	0.00	0.58
	TPHH, SR319 Pasture --> TPHH	21.9053	54.1292	0.00	0.40
	Forest-Deciduous --> FRSD	10.7550	26.5761	0.00	0.19
		148.5925	367.1794	0.02	2.69

Table11-67

Forest-Evergreen --> FRSE	755.6944	1867.3586	0.08	13.67
Forest-Mixed --> FRST	274.3307	677.8848	0.03	4.96
Residential-Low Density --> URLD	175.7171	434.2058	0.02	3.18
TPVH, SR319 Pasture --> TPVH	30.9205	76.4062	0.00	0.56
TPVM, SR319 Pasture --> TPVM	17.8722	44.1631	0.00	0.32
Residential-Medium Density --> URMD	0.0791	0.1954	0.00	0.00
SR 319 Hayland - no litter --> TBHA	3.1632	7.8165	0.00	0.06

SOIL:

MANTACHIE	452.8947	1119.1254	0.05	8.19
RUSTON	64.7670	160.0426	0.01	1.17
ATTOYAC	66.9022	165.3187	0.01	1.21
BERNALDO	57.7288	142.6509	0.01	1.04
WOODTELL	91.1799	225.3102	0.01	1.65
CHIRENO	66.9813	165.5141	0.01	1.21
BRILEY	53.8539	133.0757	0.01	0.97
PERCILLA	9.4106	23.2540	0.00	0.17
KULLIT	115.4577	285.3017	0.01	2.09
KIRVIN	38.5913	95.3611	0.00	0.70
WATER	2.1352	5.2761	0.00	0.04
LACERDA	14.4718	35.7604	0.00	0.26
LILBERT	202.9209	501.4276	0.02	3.67
SACUL	141.1589	348.8107	0.02	2.55
TENAHA	88.3330	218.2754	0.01	1.60
CUTHBERT	209.3264	517.2560	0.02	3.79
BOWIE	16.0534	39.6687	0.00	0.29
DARCO	109.3685	270.2550	0.01	1.98
MOLLVILLE	18.7421	46.3127	0.00	0.34
NACOGDOCHES	1683.8635	4160.9110	0.19	30.45
ALTO	385.5971	952.8297	0.04	6.97
BIENVILLE	17.0023	42.0136	0.00	0.31
IUKA	25.4640	62.9227	0.00	0.46
HANNAHATCHEE	112.2945	277.4853	0.01	2.03
TUSCOSO	587.0154	1450.5444	0.07	10.62
BETIS	53.5376	132.2940	0.01	0.97
TRAWICK	844.4228	2086.6110	0.09	15.27

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	56	4539.9988	11218.5640	0.51	

LANDUSE:

Table11-68

	Range-Brush	--> RNGB	370.3024	915.0357	0.04	8.16
SR319 - Poultry	Headquarters	--> TBHQ	17.7878	43.9545	0.00	0.39
	Pasture	--> PAST	910.0236	2248.7139	0.10	20.04
	Water	--> WATR	1.4230	3.5164	0.00	0.03
	Wetlands-Forested	--> WETF	784.7975	1939.2740	0.09	17.29
SR319	Pasture, no litter	--> TBPA	22.7684	56.2618	0.00	0.50
	Wetlands-Mixed	--> WETL	2.3717	5.8606	0.00	0.05
TPMH,	SR319 Pasture	--> TPMH	11.0680	27.3495	0.00	0.24
TPMV,	SR319 Pasture	--> TPMV	29.9626	74.0390	0.00	0.66
	Forest-Deciduous	--> FRSD	261.9154	647.2061	0.03	5.77
	Forest-Evergreen	--> FRSE	1144.9806	2829.3044	0.13	25.22
TPHM,	SR319 Pasture	--> TPHM	40.7933	100.8024	0.00	0.90
	Forest-Mixed	--> FRST	693.1706	1712.8593	0.08	15.27
Residential-Low Density		--> URLD	210.6866	520.6170	0.02	4.64
TPVH,	SR319 Pasture	--> TPVH	23.4008	57.8246	0.00	0.52
TPVM,	SR319 Pasture	--> TPVM	8.8544	21.8796	0.00	0.20
Agricultural Land-Row Crops		--> AGRR	4.1900	10.3537	0.00	0.09
SR 319 Hayland - no litter		--> TBHA	1.5021	3.7117	0.00	0.03

SOIL:

MANTACHIE		605.5756	1496.4076	0.07	13.34
RUSTON		11.4632	28.3263	0.00	0.25
RENTZEL		97.9515	242.0430	0.01	2.16
ATTOYAC		104.5132	258.2573	0.01	2.30
MARIETTA		95.7379	236.5731	0.01	2.11
ALAZAN		11.8585	29.3030	0.00	0.26
KEITHVILLE		60.4785	149.4454	0.01	1.33
WOODTELL		94.3148	233.0567	0.01	2.08
BERNALDO		458.6089	1133.2455	0.05	10.10
BRILEY		98.8211	244.1918	0.01	2.18
WATER		13.5978	33.6008	0.00	0.30
KIRVIN		667.7143	1649.9555	0.07	14.71
LACERDA		37.3148	92.2068	0.00	0.82
LILBERT		239.4633	591.7257	0.03	5.27
SACUL		111.1540	274.6670	0.01	2.45
TENAHA		264.6033	653.8481	0.03	5.83
CUTHBERT		775.7851	1917.0037	0.09	17.09
DARCO		99.1373	244.9733	0.01	2.18
BOWIE		144.9903	358.2783	0.02	3.19
MOLLVILLE		90.9945	224.8519	0.01	2.00
WODEN		45.7739	113.1097	0.01	1.01
BIENVILLE		1.2649	3.1257	0.00	0.03
IUKA		345.8738	854.6715	0.04	7.62

Table11-69

TUSCOSSO	52.4938	129.7147	0.01	1.16
BETIS	10.5146	25.9820	0.00	0.23
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
57				
15546.9296				
38417.2404				
1.74				
LANDUSE:				
Residential-High Density --> URHD	25.3009	62.5198	0.00	0.16
Range-Brush --> RNGB	1491.1719	3684.7603	0.17	9.59
SR319 - Poultry Headquarters --> TBHQ	37.1607	91.8259	0.00	0.24
Pasture --> PAST	2899.7996	7165.5497	0.32	18.65
Water --> WATR	57.7967	142.8187	0.01	0.37
Wetlands-Forested --> WETF	1213.4945	2998.6056	0.14	7.81
SR319 Pasture, no litter --> TBPA	22.7708	56.2678	0.00	0.15
Wetlands-Mixed --> WETL	6.0880	15.0438	0.00	0.04
TPMV, SR319 Pasture --> TPMV	12.4923	30.8691	0.00	0.08
TPHH, SR319 Pasture --> TPHH	39.6117	97.8826	0.00	0.25
Forest-Deciduous --> FRSD	1466.1082	3622.8266	0.16	9.43
Forest-Evergreen --> FRSE	4268.4202	10547.4798	0.48	27.46
Forest-Mixed --> FRST	2647.5812	6542.3056	0.30	17.03
Residential-Low Density --> URLD	1139.4894	2815.7352	0.13	7.33
TPVH, SR319 Pasture --> TPVH	16.2875	40.2471	0.00	0.10
Agricultural Land-Row Crops --> AGRR	121.0490	299.1181	0.01	0.78
TPVV, SR319 Pasture --> TPVV	4.5858	11.3317	0.00	0.03
Residential-Medium Density --> URMD	74.0051	182.8704	0.01	0.48
SR 319 Hayland - no litter --> TBHA	3.7161	9.1826	0.00	0.02
SOIL:				
MANTACHIE	365.9143	904.1925	0.04	2.35
RUSTON	139.3922	344.4450	0.02	0.90
ATTOYAC	565.7123	1397.9035	0.06	3.64
RENTZEL	523.6496	1293.9643	0.06	3.37
MARIETTA	242.8096	599.9946	0.03	1.56
BERNALDO	688.5798	1701.5152	0.08	4.43
CHIRENO	14.4690	35.7535	0.00	0.09
BRILEY	507.9156	1255.0848	0.06	3.27
PERCILLA	2.2138	5.4705	0.00	0.01
PITS	6.3252	15.6299	0.00	0.04
OSIER	79.2234	195.7651	0.01	0.51
WATER	35.5003	87.7231	0.00	0.23

Table11-70

KIRVIN	547.3692	1352.5766	0.06	3.52	
SACUL	127.8486	315.9203	0.01	0.82	
LILBERT	2144.5677	5299.3339	0.24	13.79	
TENAHA	2096.1797	5179.7648	0.23	13.48	
CUTHBERT	549.8993	1358.8286	0.06	3.54	
BOWIE	196.6354	485.8960	0.02	1.26	
MOLLVILLE	103.8128	256.5265	0.01	0.67	
DARCO	1920.8128	4746.4245	0.21	12.35	
NACOGDOCHES	750.4089	1854.2980	0.08	4.83	
ANGELINA	156.3121	386.2551	0.02	1.01	
WODEN	306.9316	758.4432	0.03	1.97	
ALTO	107.5288	265.7091	0.01	0.69	
HANNAHATCHEE	734.2005	1814.2462	0.08	4.72	
BIENVILLE	47.0439	116.2477	0.01	0.30	
IUKA	339.3483	838.5467	0.04	2.18	
TUSCOSO	13.4411	33.2136	0.00	0.09	
TONKAWA	111.1658	274.6963	0.01	0.72	
TRAWICK	1041.7646	2574.2525	0.12	6.70	
BETIS	1079.9532	2668.6183	0.12	6.95	
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	58	5677.9436	14030.4825	0.63	
LANDUSE:					
SR319 - Poultry Headquarters	Range-Brush --> RNGB	603.7185	1491.8186	0.07	10.63
	Pasture --> PAST	25.8635	63.9100	0.00	0.46
TPLH, SR319 Pastureland	Pasture --> TPLH	1574.5877	3890.8849	0.18	27.73
	Water --> WATR	0.6327	1.5635	0.00	0.01
SR319 Pasture, no litter	Wetlands-Forested --> WETF	8.8584	21.8896	0.00	0.16
	Wetlands-Mixed --> WETL	975.2193	2409.8157	0.11	17.18
TPSS, SR319 Pasture	Pasture --> TPSS	62.0091	153.2275	0.01	1.09
TPMV, SR319 Pasture	TPMV --> TPMV	21.8297	53.9423	0.00	0.38
TPHH, SR319 Pasture	TPHH --> TPHH	23.5698	58.2421	0.00	0.42
	Forest-Deciduous --> FRSD	45.0040	111.2072	0.01	0.79
Residential-Low Density	Forest-Evergreen --> FRSE	173.8469	429.5843	0.02	3.06
TPVH, SR319 Pasture	Forest-Mixed --> FRST	1335.0934	3299.0826	0.15	23.51
Agricultural Land-Row Crops	URLD --> URLD	566.2283	1399.1785	0.06	9.97
	TPVH, SR319 Pasture --> TPVH	240.0479	593.1704	0.03	4.23
	AGRR --> AGRR	0.6327	1.5635	0.00	0.01
		7.3557	18.1762	0.00	0.13

Table11-71

TPVV, SR319 Pasture --> TPVV	10.5985	26.1894	0.00	0.19
Residential-Medium Density --> URMD	0.6327	1.5635	0.00	0.01

SOIL:

MANTACHIE	978.6994	2418.4152	0.11	17.24
CUTHBERT	4699.2442	11612.0673	0.53	82.76

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	59	10031.8424	24789.1842	1.12	

LANDUSE:

Residential-High Density --> URHD	18.0279	44.5480	0.00	0.18
Range-Brush --> RNGB	883.6858	2183.6318	0.10	8.81
SR319 - Poultry Headquarters --> TBHQ	38.8233	95.9344	0.00	0.39
Pasture --> PAST	2190.8703	5413.7501	0.25	21.84
Range-Grasses --> RNGE	0.7116	1.7585	0.00	0.01
Water --> WATR	93.6979	231.5322	0.01	0.93
Wetlands-Forested --> WETF	1698.8971	4198.0596	0.19	16.94
SR319 Pasture, no litter --> TBPA	50.7629	125.4377	0.01	0.51
Wetlands-Mixed --> WETL	20.9535	51.7772	0.00	0.21
TPMH, SR319 Pasture --> TPMH	74.9583	185.2258	0.01	0.75
TPMM, SR319 Pasture --> TPMM	21.9814	54.3173	0.00	0.22
TPSS, SR319 Pasture --> TPSS	17.3954	42.9849	0.00	0.17
TPMV, SR319 Pasture --> TPMV	48.9443	120.9438	0.01	0.49
TPHH, SR319 Pasture --> TPHH	39.8513	98.4744	0.00	0.40
Forest-Deciduous --> FRSD	337.8659	834.8836	0.04	3.37
Forest-Evergreen --> FRSE	2690.4343	6648.1976	0.30	26.82
Forest-Mixed --> FRST	817.1880	2019.3124	0.09	8.15
Residential-Low Density --> URLD	911.9929	2253.5800	0.10	9.09
TPVH, SR319 Pasture --> TPVH	22.6140	55.8803	0.00	0.23
Residential-Medium Density --> URMD	52.1862	128.9546	0.01	0.52

SOIL:

MANTACHIE	1218.3099	3010.5046	0.14	12.14
WATER	1369.3335	3383.6915	0.15	13.65
TENAHA	0.7907	1.9539	0.00	0.01
CUTHBERT	6029.8748	14900.1220	0.67	60.11
MOLLVILLE	1410.5289	3485.4875	0.16	14.06
BETIS	3.0047	7.4247	0.00	0.03

Table11-72

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	60	5151.0296	12728.4517	0.58		
LANDUSE:						
Residential-High Density --> URHD		7.5919	18.7600	0.00	0.15	
Range-Brush --> RNGB		679.5547	1679.2137	0.08	13.19	
SR319 - Poultry Headquarters --> TBHQ		1.9771	4.8854	0.00	0.04	
Pasture --> PAST		777.5378	1921.3347	0.09	15.09	
Range-Grasses --> RNGE		4.1914	10.3571	0.00	0.08	
Water --> WATR		46.8958	115.8820	0.01	0.91	
Wetlands-Forested --> WETF		1135.8600	2806.7667	0.13	22.05	
SR319 Pasture, no litter --> TBPA		17.0818	42.2100	0.00	0.33	
Wetlands-Mixed --> WETL		1.5816	3.9083	0.00	0.03	
Forest-Deciduous --> FRSD		164.9658	407.6388	0.02	3.20	
Forest-Evergreen --> FRSE		1238.3507	3060.0265	0.14	24.04	
Forest-Mixed --> FRST		485.7239	1200.2480	0.05	9.43	
Residential-Low Density --> URLD		555.4745	1372.6053	0.06	10.78	
Residential-Medium Density --> URMD		34.2427	84.6153	0.00	0.66	
SOIL:						
MANTACHIE		126.2945	312.0801	0.01	2.45	
RENTZEL		385.3683	952.2645	0.04	7.48	
ATTOYAC		370.1055	914.5491	0.04	7.19	
MARIETTA		61.3679	151.6432	0.01	1.19	
BERNALDO		392.0113	968.6794	0.04	7.61	
BRILEY		3.1633	7.8167	0.00	0.06	
PITS		6.5638	16.2196	0.00	0.13	
OSIER		69.6716	172.1619	0.01	1.35	
KIRVIN		191.6956	473.6895	0.02	3.72	
WATER		35.5080	87.7420	0.00	0.69	
SACUL		142.5064	352.1405	0.02	2.77	
LILBERT		411.1492	1015.9702	0.05	7.98	
TENAHA		655.6719	1620.1979	0.07	12.73	
CUTHBERT		881.3729	2177.9165	0.10	17.11	
BOWIE		215.7367	533.0961	0.02	4.19	
MOLLVILLE		18.9798	46.9000	0.00	0.37	
DARCO		494.1066	1220.9621	0.06	9.59	
WODEN		43.6535	107.8699	0.00	0.85	
BIENVILLE		3.9541	9.7708	0.00	0.08	
IUKA		161.3280	398.6496	0.02	3.13	
TUSCOSSO		442.5449	1093.5506	0.05	8.59	
TONKAWA		38.2759	94.5816	0.00	0.74	

Table11-73

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	61	48.5409	119.9470	0.01		
LANDUSE:						
Residential-High Density --> URHD		1.6262	4.0183	0.00	3.35	
Range-Brush --> RNGB		3.0897	7.6348	0.00	6.37	
Pasture --> PAST		4.2280	10.4476	0.00	8.71	
Water --> WATR		3.9028	9.6440	0.00	8.04	
Wetlands-Forested --> WETF		28.3765	70.1198	0.00	58.46	
Forest-Mixed --> FRST		0.0813	0.2009	0.00	0.17	
Residential-Low Density --> URLD		3.4149	8.4385	0.00	7.04	
Residential-Medium Density --> URMD		3.8215	9.4431	0.00	7.87	
SOIL:						
MANTACHIE		28.4578	70.3207	0.00	58.63	
ATTOYAC		13.0093	32.1466	0.00	26.80	
MARIETTA		2.1953	5.4247	0.00	4.52	
WATER		3.2523	8.0366	0.00	6.70	
SACUL		1.6262	4.0183	0.00	3.35	
SUBBASIN #	62	1628.4134	4023.8909	0.18		
LANDUSE:						
Range-Brush --> RNGB		111.7958	276.2531	0.01	6.87	
Pasture --> PAST		347.6771	859.1276	0.04	21.35	
Water --> WATR		2.8544	7.0533	0.00	0.18	
Wetlands-Forested --> WETF		903.8812	2233.5357	0.10	55.51	
Wetlands-Mixed --> WETL		2.9336	7.2492	0.00	0.18	
Forest-Deciduous --> FRSD		75.3234	186.1280	0.01	4.63	
Forest-Evergreen --> FRSE		89.8331	221.9821	0.01	5.52	
Forest-Mixed --> FRST		66.7604	164.9682	0.01	4.10	
Residential-Low Density --> URLD		19.5841	48.3933	0.00	1.20	
Agricultural Land-Row Crops --> AGRR		7.7702	19.2006	0.00	0.48	
SOIL:						
MANTACHIE		811.6695	2005.6759	0.09	49.84	
ATTOYAC		29.6536	73.2756	0.00	1.82	

Table11-74

MARIETTA	146.5239	362.0679	0.02	9.00
ALAZAN	22.2006	54.8588	0.00	1.36
KEITHVILLE	72.5484	179.2706	0.01	4.46
WOODTELL	57.4044	141.8491	0.01	3.53
BERNALDO	63.3510	156.5434	0.01	3.89
WATER	26.9579	66.6142	0.00	1.66
SACUL	56.5322	139.6939	0.01	3.47
CUTHBERT	189.8943	469.2384	0.02	11.66
ANGELINA	67.5532	166.9274	0.01	4.15
WODEN	28.9401	71.5123	0.00	1.78
HANNAHATCHEE	44.5598	110.1094	0.00	2.74
TUSCOSSO	10.6246	26.2538	0.00	0.65
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
63		5027.5428	12423.3096	0.56
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LANDUSE:				
Residential-High Density --> URHD	3.5576	8.7909	0.00	0.07
Range-Brush --> RNGB	732.2248	1809.3640	0.08	14.56
Pasture --> PAST	1059.4412	2617.9321	0.12	21.07
Range-Grasses --> RNGE	0.7115	1.7582	0.00	0.01
Water --> WATR	11.7004	28.9123	0.00	0.23
Wetlands-Forested --> WETF	353.3052	873.0347	0.04	7.03
Wetlands-Mixed --> WETL	3.3204	8.2048	0.00	0.07
Forest-Deciduous --> FRSD	196.0610	484.4766	0.02	3.90
Forest-Evergreen --> FRSE	1433.0639	3541.1727	0.16	28.50
Forest-Mixed --> FRST	781.0819	1930.0924	0.09	15.54
Residential-Low Density --> URLD	387.7740	958.2089	0.04	7.71
Agricultural Land-Row Crops --> AGRR	43.2441	106.8584	0.00	0.86
Residential-Medium Density --> URMD	22.0569	54.5036	0.00	0.44
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SOIL:				
MANTACHIE	148.1526	366.0924	0.02	2.95
RENTZEL	11.2261	27.7402	0.00	0.22
ATTOYAC	16.8391	41.6103	0.00	0.33
MARIETTA	179.4591	443.4524	0.02	3.57
KEITHVILLE	603.9945	1492.5006	0.07	12.01
BERNALDO	202.3856	500.1049	0.02	4.03
WOODTELL	1767.0002	4366.3458	0.20	35.15
KIRVIN	417.4203	1031.4664	0.05	8.30
WATER	27.0375	66.8109	0.00	0.54

Table11-75

LILBERT	37.0777	91.6208	0.00	0.74
SACUL	690.3246	1705.8266	0.08	13.73
LACERDA	42.3745	104.7095	0.00	0.84
CUTHBERT	256.6977	634.3128	0.03	5.11
DARCO	8.8544	21.8796	0.00	0.18
MOLLVILLE	2.8460	7.0327	0.00	0.06
KURTH	290.8502	718.7055	0.03	5.79
IUKA	324.7656	802.5121	0.04	6.46
KELTYS	0.2372	0.5861	0.00	0.00
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		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	64	3573.6868	8830.7588	0.40
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LANDUSE:				
Range-Brush --> RNGB	379.7571	938.3988	0.04	10.63
Pasture --> PAST	182.8402	451.8072	0.02	5.12
Water --> WATR	331.1210	818.2165	0.04	9.27
Wetlands-Forested --> WETF	1754.3007	4334.9647	0.20	49.09
Wetlands-Mixed --> WETL	22.9341	56.6713	0.00	0.64
Forest-Deciduous --> FRSD	56.7817	140.3104	0.01	1.59
Forest-Evergreen --> FRSE	606.4884	1498.6631	0.07	16.97
Forest-Mixed --> FRST	124.0023	306.4159	0.01	3.47
Residential-Low Density --> URLD	115.4613	285.3108	0.01	3.23
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SOIL:				
MANTACHIE	908.0323	2243.7932	0.10	25.41
DAMS	12.2579	30.2898	0.00	0.34
RENTZEL	29.0235	71.7185	0.00	0.81
ATTOYAC	135.1530	333.9699	0.02	3.78
KEITHVILLE	28.7072	70.9369	0.00	0.80
ALAZAN	81.4556	201.2809	0.01	2.28
WOODTELL	531.5176	1313.4066	0.06	14.87
BERNALDO	96.7186	238.9966	0.01	2.71
PITS	54.2510	134.0570	0.01	1.52
KIRVIN	244.6041	604.4289	0.03	6.84
WATER	362.4379	895.6022	0.04	10.14
LILBERT	14.1559	34.9799	0.00	0.40
TENAHA	122.9742	303.8755	0.01	3.44
CUTHBERT	721.6334	1783.1922	0.08	20.19
MOLLVILLE	23.7249	58.6255	0.00	0.66
DARCO	8.6201	21.3006	0.00	0.24

Table11-76

BIENVILLE	51.2459	126.6311	0.01	1.43
IUKA	147.1737	363.6735	0.02	4.12
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SUBBASIN #	65	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
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LANDUSE:				
Range-Brush --> RNGB	940.3196	2323.5768	0.11	11.20
SR319 - Poultry Headquarters --> TBHQ	4.7543	11.7481	0.00	0.06
Pasture --> PAST	1712.0996	4230.6837	0.19	20.39
Range-Grasses --> RNGE	2.6941	6.6573	0.00	0.03
Water --> WATR	28.2088	69.7053	0.00	0.34
Wetlands-Forested --> WETF	2766.2053	6835.4315	0.31	32.95
SR319 Pasture, no litter --> TBPA	13.0743	32.3073	0.00	0.16
Wetlands-Mixed --> WETL	122.7400	303.2966	0.01	1.46
TPMM, SR319 Pasture --> TPMW	2.6149	6.4615	0.00	0.03
Forest-Deciduous --> FRSD	161.2497	398.4561	0.02	1.92
Forest-Evergreen --> FRSE	1792.7641	4430.0097	0.20	21.35
Forest-Mixed --> FRST	412.5933	1019.5386	0.05	4.91
Residential-Low Density --> URLD	435.0969	1075.1462	0.05	5.18
Residential-Medium Density --> URMD	0.9509	2.3496	0.00	0.01
SOIL:				
MANTACHIE	313.3870	774.3951	0.04	3.73
RUSTON	53.1688	131.3828	0.01	0.63
ATTOYAC	13.8667	34.2653	0.00	0.17
RENTZEL	508.3922	1256.2626	0.06	6.06
MARIETTA	52.9311	130.7954	0.01	0.63
BERNALDO	280.5032	693.1374	0.03	3.34
BRILEY	99.9194	246.9057	0.01	1.19
PERCILLA	1.3470	3.3286	0.00	0.02
KULLIT	45.1658	111.6069	0.01	0.54
OSIER	96.5121	238.4863	0.01	1.15
KIRVIN	288.9024	713.8924	0.03	3.44
WATER	273.0548	674.7321	0.03	3.25
LILBERT	1117.7339	2761.9764	0.13	13.31
SACUL	324.4012	801.6115	0.04	3.86
TENAHA	1301.3288	3215.6486	0.15	15.50
CUTHBERT	1315.5917	3250.8928	0.15	15.67
MOLLVILLE	168.3812	416.0783	0.02	2.01
DARCO	1267.8903	3133.0203	0.14	15.10

Table11-77

BOWIE	131.8524	325.8138	0.01	1.57
WODEN	25.7524	63.6355	0.00	0.31
ALTO	16.0854	39.7477	0.00	0.19
BIENVILLE	17.5909	43.4679	0.00	0.21
IUKA	479.6288	1185.1867	0.05	5.71
TRAWICK	6.8145	16.8389	0.00	0.08
BETIS	195.1637	482.2592	0.02	2.32

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	66	874.6852	2161.3909	0.10	
LANDUSE:					
Range-Brush --> RNGB		91.8804	227.0410	0.01	10.50
Pasture --> PAST		13.6236	33.6647	0.00	1.56
Water --> WATR		17.6632	43.6467	0.00	2.02
Wetlands-Forested --> WETF		473.0254	1168.8695	0.05	54.08
Wetlands-Mixed --> WETL		52.1183	128.7870	0.01	5.96
Forest-Deciduous --> FRSD		22.4156	55.3902	0.00	2.56
Forest-Evergreen --> FRSE		145.8205	360.3297	0.02	16.67
Forest-Mixed --> FRST		14.4157	35.6219	0.00	1.65
Residential-Low Density --> URLD		43.7224	108.0402	0.00	5.00

SOIL:		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
MANTACHIE		231.6811	572.4955	0.03	26.49
RUSTON		4.9901	12.3307	0.00	0.57
ATTOYAC		93.9397	232.1298	0.01	10.74
ALAZAN		232.7900	575.2357	0.03	26.61
BERNALDO		23.6037	58.3260	0.00	2.70
OSIER		0.3960	0.9786	0.00	0.05
WATER		157.8600	390.0799	0.02	18.05
CUTHBERT		41.9798	103.7342	0.00	4.80
MOLLVILLE		62.3361	154.0356	0.01	7.13
BOWIE		11.3266	27.9887	0.00	1.29
BIENVILLE		13.7821	34.0561	0.00	1.58

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	67	12864.1344	31787.9193	1.44	

LANDUSE:

Table11-78

Residential-High Density --> URHD	127.4397	314.9098	0.01	0.99
Range-Brush --> RNGB	1059.0459	2616.9553	0.12	8.23
SR319 - Poultry Headquarters --> TBHQ	13.5978	33.6008	0.00	0.11
Pasture --> PAST	2591.8005	6404.4687	0.29	20.15
Range-Grasses --> RNGE	11.3051	27.9355	0.00	0.09
TPLH, SR319 Pastureland --> TPLH	6.3245	15.6283	0.00	0.05
Water --> WATR	58.3440	144.1709	0.01	0.45
Wetlands-Forested --> WETF	3004.3984	7424.0185	0.34	23.35
SR319 Pasture, no litter --> TBPA	4.9015	12.1119	0.00	0.04
Wetlands-Mixed --> WETL	16.9182	41.8056	0.00	0.13
TPHH, SR319 Pasture --> TPHH	10.3565	25.5913	0.00	0.08
Forest-Deciduous --> FRSD	273.5368	675.9231	0.03	2.13
Forest-Evergreen --> FRSE	1927.8809	4763.8901	0.22	14.99
Forest-Mixed --> FRST	1707.5494	4219.4400	0.19	13.27
Residential-Low Density --> URLD	1732.8476	4281.9531	0.19	13.47
TPVM, SR319 Pasture --> TPVM	7.2732	17.9725	0.00	0.06
Residential-Medium Density --> URMD	309.3495	764.4182	0.03	2.40
SR 319 Hayland - no litter --> TBHA	1.2649	3.1257	0.00	0.01

SOIL:

MANTACHIE	475.0528	1173.8791	0.05	3.69
ROSENWALL	201.4369	497.7607	0.02	1.57
DUMPS	45.1415	111.5468	0.01	0.35
HERTY	40.9515	101.1931	0.00	0.32
ETOILE	65.8544	162.7295	0.01	0.51
ATTOYAC	308.8752	763.2461	0.03	2.40
MARIETTA	101.2719	250.2478	0.01	0.79
NACLINA	100.7185	248.8803	0.01	0.78
ALAZAN	1619.2429	4001.2301	0.18	12.59
KEITHVILLE	389.5132	962.5066	0.04	3.03
BERNALDO	411.6491	1017.2056	0.05	3.20
WOODTELL	1762.3358	4354.8199	0.20	13.70
PITS	16.5229	40.8289	0.00	0.13
MOSWELL	305.7920	755.6273	0.03	2.38
KOURY	1268.4675	3134.4467	0.14	9.86
WATER	125.3051	309.6353	0.01	0.97
KIRVIN	502.7227	1242.2528	0.06	3.91
LACERDA	7.9847	19.7307	0.00	0.06
LILBERT	27.2746	67.3970	0.00	0.21
SACUL	1532.2803	3786.3413	0.17	11.91
FULLER	457.9765	1131.6827	0.05	3.56
TENAHA	52.0194	128.5426	0.01	0.40
CUTHBERT	589.9224	1457.7277	0.07	4.59

Table11-79

DARCO	45.1415	111.5468	0.01	0.35
MOLLVILLE	254.7212	629.4289	0.03	1.98
KURTH	1077.8614	2663.4494	0.12	8.38
BIENVILLE	39.0541	96.5046	0.00	0.30
KELTYS	1037.7796	2564.4052	0.12	8.07
MISCELLANEOUS	1.2649	3.1257	0.00	0.01

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area [ha]	%Sub.Area
	68	8431.8104	20835.4251	0.94		

LANDUSE:

Residential-High Density --> URHD	2.6089	6.4468	0.00	0.03
Range-Brush --> RNGB	809.2413	1999.6757	0.09	9.60
SR319 - Poultry Headquarters --> TBHQ	38.2642	94.5529	0.00	0.45
Pasture --> PAST	2424.6406	5991.4081	0.27	28.76
Range-Grasses --> RNGE	0.8696	2.1489	0.00	0.01
Water --> WATR	16.0488	39.6575	0.00	0.19
Wetlands-Forested --> WETF	2050.8527	5067.7596	0.23	24.32
SR319 Pasture, no litter --> TBPA	26.0893	64.4679	0.00	0.31
Wetlands-Mixed --> WETL	228.3996	564.3868	0.03	2.71
TPMH, SR319 Pasture --> TPMH	12.8075	31.6479	0.00	0.15
TPHH, SR319 Pasture --> TPHH	31.5443	77.9475	0.00	0.37
Forest-Deciduous --> FRSD	103.0130	254.5504	0.01	1.22
Forest-Evergreen --> FRSE	1649.3153	4075.5407	0.18	19.56
TPHV, SR319 Pasture --> TPHV	8.8545	21.8800	0.00	0.11
Forest-Mixed --> FRST	543.9215	1344.0571	0.06	6.45
Residential-Low Density --> URLD	383.9864	948.8496	0.04	4.55
TPVH, SR319 Pasture --> TPVH	76.4494	188.9104	0.01	0.91
Agricultural Land-Row Crops --> AGRR	18.8159	46.4950	0.00	0.22
TPVV, SR319 Pasture --> TPVV	4.9807	12.3075	0.00	0.06
Residential-Medium Density --> URMD	1.1068	2.7350	0.00	0.01

SOIL:

MANTACHIE	1.3440	3.3211	0.00	0.02
RUSTON	109.4958	270.5696	0.01	1.30
RENTZEL	230.1389	568.6846	0.03	2.73
ATTOYAC	554.6734	1370.6257	0.06	6.58
MARIETTA	32.5720	80.4871	0.00	0.39
WOODTELL	79.2165	195.7479	0.01	0.94
BERNALDO	299.0777	739.0361	0.03	3.55
CHIRENO	8.4592	20.9032	0.00	0.10

Table11-80

BRILEY	26.0102	64.2725	0.00	0.31
PERCILLA	23.5594	58.2164	0.00	0.28
KULLIT	26.6427	65.8354	0.00	0.32
OSIER	21.6620	53.5279	0.00	0.26
KIRVIN	448.0237	1107.0889	0.05	5.31
WATER	222.4702	549.7350	0.02	2.64
LILBERT	1190.9350	2942.8600	0.13	14.12
SACUL	383.7492	948.2636	0.04	4.55
TENAHA	568.9830	1405.9853	0.06	6.75
CUTHBERT	1355.1392	3348.6167	0.15	16.07
DARCO	130.5253	322.5346	0.01	1.55
MOLLVILLE	87.9129	217.2371	0.01	1.04
BOWIE	375.2109	927.1650	0.04	4.45
NACOGDOCHES	442.4105	1093.2186	0.05	5.25
WODEN	99.6135	246.1500	0.01	1.18
ALTO	221.3634	547.0000	0.02	2.63
HANNAHATCHEE	285.9541	706.6068	0.03	3.39
BIENVILLE	52.1785	128.9357	0.01	0.62
IUKA	182.3876	450.6889	0.02	2.16
TUSCOSO	793.9040	1961.7764	0.09	9.42
BETIS	4.1110	10.1586	0.00	0.05
TRAWICK	174.0865	430.1764	0.02	2.06

SUBBASIN #	Area [ha]	Area [acres] %Wat.Area %Sub.Area		
		26514.1570	1.20	
LANDUSE:				
Range-Brush --> RNGB	1347.2479	3329.1169	0.15	12.56
SR319 - Poultry Headquarters --> TBHQ	19.2904	47.6677	0.00	0.18
Pasture --> PAST	1974.9780	4880.2693	0.22	18.41
Range-Grasses --> RNGE	2.8461	7.0329	0.00	0.03
Water --> WATR	2.4508	6.0561	0.00	0.02
Wetlands-Forested --> WETF	2873.8811	7101.5040	0.32	26.78
Wetlands-Mixed --> WETL	32.2562	79.7066	0.00	0.30
TPSS, SR319 Pasture --> TPSS	7.7478	19.1452	0.00	0.07
TPMV, SR319 Pasture --> TPMV	10.5149	25.9828	0.00	0.10
TPHH, SR319 Pasture --> TPHH	3.0042	7.4237	0.00	0.03
Forest-Deciduous --> FRSD	227.7696	562.8300	0.03	2.12
Forest-Evergreen --> FRSE	2994.9208	7400.5990	0.33	27.91
Forest-Mixed --> FRST	780.1562	1927.8050	0.09	7.27
Residential-Low Density --> URLD	444.0756	1097.3329	0.05	4.14

Table11-81

TPVH, SR319 Pasture --> TPVH	8.7756	21.6849	0.00	0.08
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SOIL:

MANTACHIE	278.6046	688.4460	0.03	2.60
RUSTON	268.3269	663.0493	0.03	2.50
RENTZEL	608.2025	1502.8987	0.07	5.67
ATTOYAC	58.7410	145.1519	0.01	0.55
MARIETTA	153.6911	379.7784	0.02	1.43
WOODTELL	349.9160	864.6600	0.04	3.26
BERNALDO	62.3777	154.1384	0.01	0.58
CHIRENO	5.2179	12.8937	0.00	0.05
BRILEY	110.2876	272.5261	0.01	1.03
KULLIT	6.6410	16.4102	0.00	0.06
OSIER	11.7798	29.1085	0.00	0.11
KIRVIN	576.1835	1423.7782	0.06	5.37
WATER	17.8674	44.1512	0.00	0.17
LACERDA	165.3128	408.4962	0.02	1.54
LILBERT	1196.3239	2956.1761	0.13	11.15
SACUL	293.7049	725.7596	0.03	2.74
TENAHA	1602.4510	3959.7366	0.18	14.93
CUTHBERT	1911.1772	4722.6144	0.21	17.81
MOLLVILLE	2.4508	6.0561	0.00	0.02
DARCO	1133.0765	2799.8887	0.13	10.56
BOWIE	162.4667	401.4633	0.02	1.51
NACOGDOCHES	278.7628	688.8367	0.03	2.60
ALTO	4.9017	12.1123	0.00	0.05
HANNAHATCHEE	427.3941	1056.1121	0.05	3.98
BIENVILLE	39.6877	98.0703	0.00	0.37
IUKA	121.9093	301.2440	0.01	1.14
TONKAWA	41.1108	101.5868	0.00	0.38
BETIS	208.6372	515.5531	0.02	1.94
TRAWICK	632.7108	1563.4601	0.07	5.90

	Area [ha]	Area [acres]	%Wat.	Area [ha]	%Sub.Area
SUBBASIN #	70	459.6366		1135.7850	0.05
LANDUSE:					
Range-Brush --> RNGB	15.9695	39.4614	0.00	3.47	
Pasture --> PAST	5.9293	14.6515	0.00	1.29	
Water --> WATR	12.2538	30.2798	0.00	2.67	

Table11-82

Wetlands-Forested --> WETF	72.1789	178.3577	0.01	15.70
Wetlands-Mixed --> WETL	257.2510	635.6802	0.03	55.97
Forest-Evergreen --> FRSE	83.2469	205.7072	0.01	18.11
Forest-Mixed --> FRST	4.5853	11.3305	0.00	1.00
Residential-Low Density --> URLD	8.2219	20.3168	0.00	1.79

SOIL:

ATTOYAC	20.1595	49.8151	0.00	4.39
WOODTELL	21.0291	51.9640	0.00	4.58
BERNALDO	20.4757	50.5965	0.00	4.45
WATER	280.4147	692.9187	0.03	61.01
KIRVIN	8.5381	21.0982	0.00	1.86
LACERDA	4.9015	12.1119	0.00	1.07
SACUL	19.4480	48.0570	0.00	4.23
MOLLVILLE	69.9653	172.8878	0.01	15.22
BIENVILLE	14.7046	36.3357	0.00	3.20

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	71	8746.2200	21612.3469	0.98	

LANDUSE:

Range-Brush --> RNGB	715.5438	1768.1444	0.08	8.18
Pasture --> PAST	1033.6686	2554.2468	0.12	11.82
Water --> WATR	86.1720	212.9353	0.01	0.99
Wetlands-Forested --> WETF	1920.6867	4746.1130	0.21	21.96
Wetlands-Mixed --> WETL	685.1069	1692.9333	0.08	7.83
Forest-Deciduous --> FRSD	156.6907	387.1906	0.02	1.79
Forest-Evergreen --> FRSE	3491.2306	8627.0053	0.39	39.92
Forest-Mixed --> FRST	429.0417	1060.1834	0.05	4.91
Residential-Low Density --> URLD	224.9168	555.7807	0.03	2.57
TPVM, SR319 Pasture --> TPVM	0.1581	0.3907	0.00	0.00
Residential-Medium Density --> URMD	3.0042	7.4234	0.00	0.03

SOIL:

ROSENWALL	42.0583	103.9281	0.00	0.48
MANTACHIE	88.0694	217.6238	0.01	1.01
RUSTON	84.4327	208.6375	0.01	0.97
ETOILE	169.7351	419.4239	0.02	1.94
ATTOYAC	410.7795	1015.0567	0.05	4.70
MARIETTA	74.2344	183.4369	0.01	0.85
KEITHVILLE	12.8072	31.6473	0.00	0.15

Table11-83

ALAZAN	678.4661	1676.5236	0.08	7.76
NACLINA	149.2594	368.8274	0.02	1.71
WOODTELL	1459.5480	3606.6161	0.16	16.69
BERNALDO	556.0070	1373.9211	0.06	6.36
BRILEY	13.7559	33.9915	0.00	0.16
KOURY	257.4092	636.0710	0.03	2.94
WATER	1002.4412	2477.0822	0.11	11.46
OSIER	1.2649	3.1257	0.00	0.01
KIRVIN	217.7226	538.0035	0.02	2.49
LILBERT	12.8863	31.8426	0.00	0.15
LACERDA	262.3107	648.1829	0.03	3.00
SACUL	1243.1693	3071.9336	0.14	14.21
FULLER	147.8364	365.3110	0.02	1.69
CUTHBERT	793.4148	1960.5676	0.09	9.07
DARCO	4.6644	11.5259	0.00	0.05
BOWIE	196.8516	486.4302	0.02	2.25
MOLLVILLE	413.9418	1022.8709	0.05	4.73
KURTH	186.0208	459.6668	0.02	2.13
BIENVILLE	38.5798	95.3325	0.00	0.44
IUKA	93.6824	231.4939	0.01	1.07
KELTYS	134.8710	333.2730	0.02	1.54

SUBBASIN #	72	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	72	5723.7176	14143.5924	0.64	
LANDUSE:					
Residential-High Density --> URHD		0.7115	1.7582	0.00	0.01
Range-Brush --> RNGB		221.9917	548.5526	0.02	3.88
SR319 - Poultry Headquarters --> TBHQ		35.1803	86.9323	0.00	0.61
Pasture --> PAST		693.4078	1713.4454	0.08	12.11
Range-Grasses --> RNGE		1.6602	4.1024	0.00	0.03
Water --> WATR		0.8696	2.1489	0.00	0.02
Wetlands-Forested --> WETF		1342.2276	3316.7115	0.15	23.45
SR319 Pasture, no litter --> TBPA		43.8766	108.4212	0.00	0.77
Wetlands-Mixed --> WETL		1.8974	4.6885	0.00	0.03
TPMH, SR319 Pasture --> TPMH		56.6838	140.0684	0.01	0.99
TPMV, SR319 Pasture --> TPMV		159.6949	394.6140	0.02	2.79
Forest-Deciduous --> FRSD		32.4133	80.0949	0.00	0.57
Forest-Evergreen --> FRSE		2533.5356	6260.4932	0.28	44.26
TPHV, SR319 Pasture --> TPHV		6.7198	16.6050	0.00	0.12

Table11-84

Forest-Mixed --> FRST	332.3551	821.2661	0.04	5.81
Residential-Low Density --> URLD	250.7684	619.6613	0.03	4.38
TPVH, SR319 Pasture --> TPVH	5.6130	13.8701	0.00	0.10
Residential-Medium Density --> URMD	1.0277	2.5396	0.00	0.02
SR 319 Hayland - no litter --> TBHA	3.0832	7.6188	0.00	0.05

SOIL:

MANTACHIE	600.9113	1484.8818	0.07	10.50
KULLIT	4673.5261	11548.5167	0.52	81.65
CUTHBERT	2.2926	5.6653	0.00	0.04
MOLLVILLE	446.9876	1104.5286	0.05	7.81

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	73	5196.4080	12840.5840	0.58	

LANDUSE:

Range-Brush --> RNGB	465.4868	1150.2413	0.05	8.96
SR319 - Poultry Headquarters --> TBHO	19.3689	47.8616	0.00	0.37
Pasture --> PAST	961.0944	2374.9122	0.11	18.50
Water --> WATR	4.8225	11.9166	0.00	0.09
Wetlands-Forested --> WETF	898.0860	2219.2155	0.10	17.28
SR319 Pasture, no litter --> TBPA	0.9487	2.3442	0.00	0.02
Wetlands-Mixed --> WETL	2.6879	6.6420	0.00	0.05
TPSS, SR319 Pasture --> TPSS	2.7670	6.8374	0.00	0.05
TPMV, SR319 Pasture --> TPMV	11.1470	27.5448	0.00	0.21
TPHH, SR319 Pasture --> TPHH	1.5021	3.7117	0.00	0.03
Forest-Deciduous --> FRSD	69.9653	172.8878	0.01	1.35
Forest-Evergreen --> FRSE	2140.4647	5289.1954	0.24	41.19
TPHV, SR319 Pasture --> TPHV	6.6408	16.4097	0.00	0.13
Forest-Mixed --> FRST	321.5243	794.5026	0.04	6.19
Residential-Low Density --> URLD	288.1623	712.0634	0.03	5.55
Residential-Medium Density --> URMD	1.7393	4.2978	0.00	0.03

SOIL:

MANTACHIE	254.0097	627.6707	0.03	4.89
KULLIT	2243.7130	5544.3270	0.25	43.18
WATER	24.7448	61.1456	0.00	0.48
SACUL	0.8696	2.1489	0.00	0.02
MOLLVILLE	2673.0709	6605.2917	0.30	51.44

Table11-85

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area [acres]	%Sub.Area
	74	12684.6752	31344.4667	1.42		
LANDUSE:						
Residential-High Density --> URHD		1.0280	2.5403	0.00	0.01	
Range-Brush --> RNGB		775.7510	1916.9195	0.09	6.12	
Pasture --> PAST		1190.8292	2942.5984	0.13	9.39	
Range-Grasses --> RNGE		32.9753	81.4837	0.00	0.26	
Water --> WATR		1568.8200	3876.6325	0.18	12.37	
Wetlands-Forested --> WETF		1652.0886	4082.3936	0.18	13.02	
Wetlands-Mixed --> WETL		752.0277	1858.2981	0.08	5.93	
Forest-Deciduous --> FRSD		49.1863	121.5417	0.01	0.39	
Forest-Evergreen --> FRSE		5300.1743	13096.9956	0.59	41.78	
Forest-Mixed --> FRST		764.2057	1888.3904	0.09	6.02	
Residential-Low Density --> URLD		584.6996	1444.8219	0.07	4.61	
Residential-Medium Density --> URMD		12.8896	31.8510	0.00	0.10	
SOIL:						
RUSTON		21.9045	54.1271	0.00	0.17	
ETOILE		1167.5013	2884.9540	0.13	9.20	
RENTZEL		138.2276	341.5673	0.02	1.09	
ATTOYAC		207.9740	513.9142	0.02	1.64	
MARIETTA		536.6204	1326.0159	0.06	4.23	
ALAZAN		483.8757	1195.6810	0.05	3.81	
KEITHVILLE		56.6986	140.1051	0.01	0.45	
NACLINA		273.4502	675.7092	0.03	2.16	
WOODTELL		2179.9314	5386.7196	0.24	17.19	
BERNALDO		823.9092	2035.9209	0.09	6.50	
PITS		0.8699	2.1495	0.00	0.01	
KOURY		221.7335	547.9146	0.02	1.75	
KULLIT		252.3365	623.5362	0.03	1.99	
KIRVIN		349.2856	863.1023	0.04	2.75	
WATER		2287.7932	5653.2515	0.26	18.04	
LACERDA		933.1154	2305.7747	0.10	7.36	
LILBERT		38.4317	94.9667	0.00	0.30	
SACUL		1991.6477	4921.4611	0.22	15.70	
TENAHA		69.1138	170.7837	0.01	0.54	
CUTHBERT		333.4701	824.0213	0.04	2.63	
DARCO		14.0758	34.7820	0.00	0.11	
BOWIE		29.4169	72.6905	0.00	0.23	
MOLLVILLE		107.3083	265.1641	0.01	0.85	
WODEN		3.7166	9.1840	0.00	0.03	

Table11-86

KURTH	28.3098	69.9549	0.00	0.22
BIENVILLE	92.6789	229.0142	0.01	0.73
KELTYS	41.2785	102.0012	0.00	0.33
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
	75	5648.2972	13957.2248	0.63
LANDUSE:				
Residential-High Density --> URHD	1.6602	4.1024	0.00	0.03
Range-Brush --> RNGB	439.4771	1085.9700	0.05	7.78
SR319 - Poultry Headquarters --> TBHQ	20.2386	50.0105	0.00	0.36
Pasture --> PAST	1589.4384	3927.5817	0.18	28.14
Range-Grasses --> RNGE	1.9764	4.8838	0.00	0.03
TPLH, SR319 Pastureland --> TPLH	5.7712	14.2608	0.00	0.10
Water --> WATR	42.5326	105.1002	0.00	0.75
Wetlands-Forested --> WETF	1204.7477	2976.9917	0.13	21.33
SR319 Pasture, no litter --> TBPA	4.8225	11.9166	0.00	0.09
Wetlands-Mixed --> WETL	4.5062	11.1351	0.00	0.08
TPMH, SR319 Pasture --> TPMH	61.1900	151.2036	0.01	1.08
Forest-Deciduous --> FRSD	93.3662	230.7125	0.01	1.65
Forest-Evergreen --> FRSE	1184.0348	2925.8091	0.13	20.96
TPHV, SR319 Pasture --> TPHV	12.8863	31.8426	0.00	0.23
Forest-Mixed --> FRST	560.5923	1385.2515	0.06	9.92
Residential-Low Density --> URLD	388.5645	960.1624	0.04	6.88
TPVM, SR319 Pasture --> TPVM	28.4605	70.3273	0.00	0.50
Residential-Medium Density --> URMD	4.0319	9.9630	0.00	0.07
SOIL:				
ROSENWALL	542.0930	1339.5388	0.06	9.60
HERTY	77.0014	190.2743	0.01	1.36
KEITHVILLE	28.6186	70.7180	0.00	0.51
ALAZAN	398.4466	984.5815	0.04	7.05
MOSWELL	10.5936	26.1774	0.00	0.19
KOURY	879.9820	2174.4796	0.10	15.58
WATER	30.8322	76.1879	0.00	0.55
LACERDA	5.5340	13.6747	0.00	0.10
SACUL	657.3579	1624.3642	0.07	11.64
FULLER	1753.0861	4331.9634	0.20	31.04
DARCO	3.2413	8.0095	0.00	0.06
KURTH	623.2053	1539.9715	0.07	11.03
KELTYS	638.3052	1577.2840	0.07	11.30

Table11-87

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	76	14978.2736	37012.0630		1.68	
LANDUSE:						
Residential-High Density --> URHD		0.6325	1.5630	0.00	0.00	
Range-Brush --> RNGB	1084.1137	2678.8992	0.12	7.24		
SR319 - Poultry Headquarters --> TBHQ	17.0776	42.1997	0.00	0.11		
Pasture --> PAST	1985.9869	4907.4729	0.22	13.26		
Range-Grasses --> RNGE	19.1333	47.2793	0.00	0.13		
Water --> WATR	395.4738	977.2355	0.04	2.64		
Wetlands-Forested --> WETF	4194.7737	10365.4954	0.47	28.01		
SR319 Pasture, no litter --> TBPA	43.0103	106.2807	0.00	0.29		
Wetlands-Mixed --> WETL	363.8485	899.0879	0.04	2.43		
TPSS, SR319 Pasture --> TPSS	10.9107	26.9609	0.00	0.07		
TPMV, SR319 Pasture --> TPMV	20.7936	51.3820	0.00	0.14		
TPHH, SR319 Pasture --> TPHH	17.2358	42.5904	0.00	0.12		
Forest-Deciduous --> FRSD	156.7031	387.2213	0.02	1.05		
Forest-Evergreen --> FRSE	5038.6145	12450.6683	0.56	33.64		
TPHM, SR319 Pasture --> TPHM	4.8229	11.9175	0.00	0.03		
TPHV, SR319 Pasture --> TPHV	29.4115	72.6773	0.00	0.20		
Forest-Mixed --> FRST	922.6668	2279.9557	0.10	6.16		
Residential-Low Density --> URLD	616.6924	1523.8779	0.07	4.12		
TPVL, SR319 Pasture --> TPVL	8.6969	21.4906	0.00	0.06		
Agricultural Land-Row Crops --> AGRR	13.9942	34.5803	0.00	0.09		
Residential-Medium Density --> URMD	4.0322	9.9638	0.00	0.03		
SR 319 Hayland - no litter --> TBHA	29.6487	73.2634	0.00	0.20		
SOIL:						
MANTACHIE	2024.8859	5003.5944	0.23	13.52		
RUSTON	83.8069	207.0911	0.01	0.56		
ETOILE	915.4720	2262.1772	0.10	6.11		
RENTZEL	74.3193	183.6468	0.01	0.50		
ATTOYAC	228.3343	564.2256	0.03	1.52		
MARIETTA	350.2497	865.4845	0.04	2.34		
NACLINA	175.6783	434.1098	0.02	1.17		
WOODTELL	1591.4618	3932.5818	0.18	10.63		
BERNALDO	598.5079	1478.9430	0.07	4.00		
BRILEY	31.6253	78.1476	0.00	0.21		
PITS	16.0498	39.6599	0.00	0.11		
KULLIT	284.8645	703.9144	0.03	1.90		

Table11-88

KIRVIN	804.5465	1988.0745	0.09	5.37
WATER	485.2895	1199.1747	0.05	3.24
LACERDA	534.4668	1320.6942	0.06	3.57
LILBERT	95.5873	236.2011	0.01	0.64
SACUL	1499.4323	3705.1723	0.17	10.01
TENAHA	121.1247	299.3052	0.01	0.81
CUTHBERT	1911.8256	4724.2168	0.21	12.76
BOWIE	266.8381	659.3702	0.03	1.78
MOLLVILLE	2266.6610	5601.0327	0.25	15.13
WODEN	15.2592	37.7062	0.00	0.10
BIENVILLE	19.9239	49.2330	0.00	0.13
IUKA	546.0891	1349.4134	0.06	3.65
TUSCOSSO	20.5564	50.7959	0.00	0.14
TRAWICK	15.4173	38.0969	0.00	0.10

SUBBASIN #	77	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		5521.4900	13643.8779	0.62	
LANDUSE:					
SR319 - Poultry Headquarters	Range-Brush --> RNGB	309.6746	765.2215	0.03	5.61
	Headquarters --> TBHQ	21.1878	52.3562	0.00	0.38
	Pasture --> PAST	877.0030	2167.1182	0.10	15.88
	Range-Grasses --> RNGE	0.8697	2.1489	0.00	0.02
	Water --> WATR	17.4721	43.1744	0.00	0.32
	Wetlands-Forested --> WETF	943.0174	2330.2431	0.11	17.08
SR319	Pasture, no litter --> TBPA	39.3714	97.2888	0.00	0.71
	Wetlands-Mixed --> WETL	84.1980	208.0574	0.01	1.52
	TPMH, SR319 Pasture --> TPMH	12.9657	32.0389	0.00	0.23
	TPMM, SR319 Pasture --> TPMM	36.7625	90.8420	0.00	0.67
	TPSS, SR319 Pasture --> TPSS	25.6152	63.2963	0.00	0.46
	TPMV, SR319 Pasture --> TPMV	88.2300	218.0207	0.01	1.60
	TPHH, SR319 Pasture --> TPHH	22.2156	54.8959	0.00	0.40
	Forest-Deciduous --> FRSD	53.0487	131.0859	0.01	0.96
	Forest-Evergreen --> FRSE	2336.3556	5773.2514	0.26	42.31
	Forest-Mixed --> FRST	386.0458	953.9384	0.04	6.99
	Residential-Low Density --> URLD	249.2735	615.9672	0.03	4.51
	TPVH, SR319 Pasture --> TPVH	15.4956	38.2904	0.00	0.28
	TPVL, SR319 Pasture --> TPVL	0.4744	1.1722	0.00	0.01
	Residential-Medium Density --> URMD	2.2137	5.4701	0.00	0.04

SOIL:

Table11-89

MANTACHIE	787.9033	1946.9486	0.09	14.27
BERNALDO	14.9422	36.9229	0.00	0.27
KULLIT	2164.2438	5347.9547	0.24	39.20
WATER	9.8033	24.2245	0.00	0.18
CUTHBERT	574.3646	1419.2837	0.06	10.40
MOLLVILLE	1970.2327	4868.5435	0.22	35.68
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SUBBASIN #	78	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:		6439.8148	15913.1044	0.72
Range-Brush --> RNGB	336.8903	832.4727	0.04	5.23
Pasture --> PAST	1086.1767	2683.9969	0.12	16.87
Range-Grasses --> RNGE	45.7779	113.1194	0.01	0.71
Water --> WATR	1984.3399	4903.4032	0.22	30.81
Wetlands-Forested --> WETF	727.5439	1797.7973	0.08	11.30
Wetlands-Mixed --> WETL	249.2877	616.0025	0.03	3.87
Forest-Deciduous --> FRSD	76.8499	189.8999	0.01	1.19
Forest-Evergreen --> FRSE	1129.3454	2790.6690	0.13	17.54
Forest-Mixed --> FRST	592.1078	1463.1280	0.07	9.19
Residential-Low Density --> URLD	211.1000	521.6386	0.02	3.28
Residential-Medium Density --> URMD	0.3953	0.9769	0.00	0.01
SOIL:				
ROSENWALL	663.9767	1640.7196	0.07	10.31
HERTY	31.4673	77.7574	0.00	0.49
ATTOYAC	94.6392	233.8582	0.01	1.47
ALAZAN	547.1996	1352.1577	0.06	8.50
WOODTELL	14.0733	34.7759	0.00	0.22
BERNALDO	86.2585	213.1490	0.01	1.34
BRILEY	1.5813	3.9074	0.00	0.02
MOSWELL	2.8463	7.0333	0.00	0.04
KOURY	292.5356	722.8700	0.03	4.54
KIRVIN	285.3408	705.0913	0.03	4.43
WATER	2175.1996	5375.0270	0.24	33.78
LILBERT	9.9620	24.6167	0.00	0.15
SACUL	153.2254	378.6276	0.02	2.38
FULLER	670.2227	1656.1538	0.07	10.41
CUTHBERT	742.5660	1834.9176	0.08	11.53
MOLLVILLE	15.4174	38.0972	0.00	0.24
BOWIE	6.3251	15.6296	0.00	0.10

Table11-90

KURTH	262.3332	648.2386	0.03	4.07
IUKA	57.6374	142.4249	0.01	0.90
KELTYS	327.0073	808.0515	0.04	5.08

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	79	5261.9464	13002.5327	0.59	
LANDUSE:					
Range-Brush --> RNGB	335.4383	828.8848	0.04	6.37	
Pasture --> PAST	704.4758	1740.7949	0.08	13.39	
Range-Grasses --> RNGE	0.0791	0.1954	0.00	0.00	
Water --> WATR	158.5881	391.8791	0.02	3.01	
Wetlands-Forested --> WETF	1249.1776	3086.7804	0.14	23.74	
Wetlands-Mixed --> WETL	117.3204	289.9046	0.01	2.23	
Forest-Deciduous --> FRSD	70.9140	175.2321	0.01	1.35	
Forest-Evergreen --> FRSE	1775.5383	4387.4439	0.20	33.74	
Forest-Mixed --> FRST	627.1582	1549.7392	0.07	11.92	
Residential-Low Density --> URLD	223.2566	551.6782	0.02	4.24	

SOIL:	ROSENWALL	550.3939	1360.0510	0.06	10.46
	HERTY	23.7171	58.6060	0.00	0.45
	ETOILE	18.7365	46.2988	0.00	0.36
	ATTOYAC	48.3037	119.3610	0.01	0.92
	RAYLAKE	7.1942	17.7772	0.00	0.14
	KEITHVILLE	7.5895	18.7539	0.00	0.14
	ALAZAN	1276.2942	3153.7867	0.14	24.26
	BERNALDO	168.3121	415.9076	0.02	3.20
	MOSWELL	32.0180	79.1182	0.00	0.61
	KOURY	388.4855	959.9670	0.04	7.38
	WATER	243.2580	601.1027	0.03	4.62
	SACUL	19.2899	47.6663	0.00	0.37
	FULLER	1524.2165	3766.4152	0.17	28.97
	TENAHA	8.2219	20.3168	0.00	0.16
	MOLLVILLE	390.8572	965.8276	0.04	7.43
	KURTH	66.9612	165.4644	0.01	1.27
	KELTYS	488.0971	1206.1124	0.05	9.28

Area [ha] Area [acres] %Wat. Area %Sub. Area

Table11-91

SUBBASIN #	80	469.8350	1160.9858	0.05
LANDUSE:				
Range-Brush --> RNGB	2.9256	7.2293	0.00	0.62
Pasture --> PAST	0.7907	1.9539	0.00	0.17
Range-Grasses --> RNGE	0.8698	2.1493	0.00	0.19
Water --> WATR	223.6105	552.5526	0.03	47.59
Wetlands-Forested --> WETF	24.1164	59.5928	0.00	5.13
Wetlands-Mixed --> WETL	84.2888	208.2819	0.01	17.94
Forest-Evergreen --> FRSE	109.9075	271.5870	0.01	23.39
Forest-Mixed --> FRST	14.3908	35.5603	0.00	3.06
Residential-Low Density --> URLD	7.8279	19.3433	0.00	1.67
Residential-Medium Density --> URMD	1.1070	2.7354	0.00	0.24

SOIL:				
MANTACHIE	0.6326	1.5631	0.00	0.13
ATTOYAC	41.3537	102.1871	0.00	8.80
BERNALDO	228.1965	563.8850	0.03	48.57
BRILEY	3.2419	8.0108	0.00	0.69
WATER	123.5076	305.1935	0.01	26.29
SACUL	8.4605	20.9063	0.00	1.80
TENAHA	8.4605	20.9063	0.00	1.80
MOLLVILLE	55.9817	138.3335	0.01	11.92

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	81	8019.0544	19815.4844	0.90	
LANDUSE:					
Range-Brush --> RNGB	212.9744	526.2703	0.02	2.66	
SR319 - Poultry Headquarters --> TBHQ	10.2057	25.2187	0.00	0.13	
Pasture --> PAST	604.6668	1494.1619	0.07	7.54	
Range-Grasses --> RNGE	14.1614	34.9935	0.00	0.18	
Water --> WATR	604.7459	1494.3574	0.07	7.54	
Wetlands-Forested --> WETF	1335.4410	3299.9416	0.15	16.65	
Wetlands-Mixed --> WETL	220.2528	544.2558	0.02	2.75	
TPMM, SR319 Pasture --> TPMV	4.3513	10.7522	0.00	0.05	
TPMV, SR319 Pasture --> TPMV	40.1107	99.1155	0.00	0.50	
Forest-Deciduous --> FRSD	29.0348	71.7464	0.00	0.36	
Forest-Evergreen --> FRSE	4178.3956	10325.0245	0.47	52.11	
Forest-Mixed --> FRST	439.3190	1085.5791	0.05	5.48	

Table11-92

Residential-Low Density --> URLD	325.3951	804.0675	0.04	4.06
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SOIL:

MANTACHIE	770.0938	1902.9402	0.09	9.60
BERNALDO	721.9135	1783.8843	0.08	9.00
KULLIT	3105.2169	7673.1461	0.35	38.72
WATER	51.3449	126.8757	0.01	0.64
SACUL	3370.4854	8328.6380	0.38	42.03

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	82	8204.3640	20273.3937	0.92

LANDUSE:

Residential-High Density --> URHD	2.3721	5.8617	0.00	0.03
Range-Brush --> RNGB	213.3345	527.1602	0.02	2.60
Pasture --> PAST	687.3672	1698.5188	0.08	8.38
Range-Grasses --> RNGE	79.7039	196.9524	0.01	0.97
Water --> WATR	3178.1147	7853.2803	0.36	38.74
Wetlands-Forested --> WETF	1095.2172	2706.3366	0.12	13.35
Wetlands-Mixed --> WETL	470.8699	1163.5430	0.05	5.74
TPSS, SR319 Pasture --> TPSS	6.8792	16.9989	0.00	0.08
TPMV, SR319 Pasture --> TPMV	16.5259	40.8364	0.00	0.20
Forest-Deciduous --> FRSD	80.8900	199.8832	0.01	0.99
Forest-Evergreen --> FRSE	1525.9979	3770.8172	0.17	18.60
Forest-Mixed --> FRST	515.3870	1273.5472	0.06	6.28
Residential-Low Density --> URLD	320.8715	792.8896	0.04	3.91
TPVV, SR319 Pasture --> TPVV	4.1908	10.3556	0.00	0.05
Residential-Medium Density --> URMD	6.6420	16.4127	0.00	0.08

SOIL:

ROSENWALL	85.7133	211.8020	0.01	1.04
HERTY	39.3775	97.3038	0.00	0.48
ATTOYAC	123.5885	305.3934	0.01	1.51
MARIETTA	59.1454	146.1512	0.01	0.72
KEITHVILLE	49.3405	121.9229	0.01	0.60
ALAZAN	790.6344	1953.6972	0.09	9.64
BERNALDO	260.5401	643.8076	0.03	3.18
BRILEY	48.0754	118.7967	0.01	0.59
KULLIT	4.4280	10.9418	0.00	0.05
MOSWELL	166.0498	410.3174	0.02	2.02
KOURY	111.1743	274.7173	0.01	1.36

Table11-93

KIRVIN	270.7403	669.0128	0.03	3.30
WATER	3279.8004	8104.5509	0.37	39.98
LILBERT	91.6437	226.4561	0.01	1.12
SACUL	1037.8114	2564.4840	0.12	12.65
FULLER	237.6094	587.1447	0.03	2.90
CUTHBERT	715.5166	1768.0774	0.08	8.72
TENAHA	86.8203	214.5374	0.01	1.06
DARCO	22.8516	56.4675	0.00	0.28
MOLLVILLE	504.0008	1245.4111	0.06	6.14
BIENVILLE	20.4004	50.4104	0.00	0.25
IUKA	86.0296	212.5835	0.01	1.05
KELTYS	113.0720	279.4066	0.01	1.38

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	83	650.0056	1606.1963	0.07	
LANDUSE:					
Range-Brush --> RNGB		3.7170	9.1850	0.00	0.57
Pasture --> PAST		0.4745	1.1725	0.00	0.07
Range-Grasses --> RNGE		6.1687	15.2431	0.00	0.95
Water --> WATR		395.6659	977.7102	0.04	60.87
Wetlands-Forested --> WETF		37.3285	92.2405	0.00	5.74
Wetlands-Mixed --> WETL		26.0983	64.4902	0.00	4.02
Forest-Deciduous --> FRSD		1.0281	2.5405	0.00	0.16
Forest-Evergreen --> FRSE		132.4686	327.3365	0.01	20.38
Forest-Mixed --> FRST		19.7714	48.8562	0.00	3.04
Residential-Low Density --> URLD		27.2846	67.4216	0.00	4.20

SOIL:		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
ATTOYAC		10.5975	26.1869	0.00	1.63
BERNALDO		209.5772	517.8757	0.02	32.24
WATER		235.4382	581.7796	0.03	36.22
SACUL		124.7973	308.3803	0.01	19.20
MOLLVILLE		69.5954	171.9738	0.01	10.71

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	84	6345.2628	15679.4616	0.71	

LANDUSE:

Table11-94

Residential-High Density --> URHD	0.3953	0.9768	0.00	0.01
Range-Brush --> RNGB	64.7476	159.9945	0.01	1.02
Pasture --> PAST	58.5811	144.7569	0.01	0.92
Range-Grasses --> RNGE	125.4633	310.0260	0.01	1.98
Water --> WATR	2974.1196	7349.1982	0.33	46.87
Wetlands-Forested --> WETF	339.2330	838.2618	0.04	5.35
Wetlands-Mixed --> WETL	588.0250	1453.0392	0.07	9.27
Forest-Deciduous --> FRSD	16.3648	40.4382	0.00	0.26
Forest-Evergreen --> FRSE	1752.4537	4330.4008	0.20	27.62
Forest-Mixed --> FRST	257.2511	635.6802	0.03	4.05
Residential-Low Density --> URLD	162.3038	401.0607	0.02	2.56
Residential-Medium Density --> URMD	6.3245	15.6283	0.00	0.10

SOIL:

ROSENWALL	263.2594	650.5271	0.03	4.15
HERTY	7.5895	18.7539	0.00	0.12
ALAZAN	412.5978	1019.5499	0.05	6.50
BERNALDO	1673.2387	4134.6566	0.19	26.37
MOSWELL	313.1443	773.7952	0.04	4.94
WATER	1606.5938	3969.9736	0.18	25.32
KIRVIN	7.9057	19.5353	0.00	0.12
SACUL	1978.3192	4888.5257	0.22	31.18
FULLER	59.4508	146.9058	0.01	0.94
TENAHA	4.3481	10.7444	0.00	0.07
DARCO	6.2455	15.4329	0.00	0.10
KELTYS	12.5700	31.0612	0.00	0.20

SUBBASIN #	85	Area [ha]	Area [acres] %Wat.Area %Sub.Area		
			Area [acres]	%Wat.Area	%Sub.Area
		8327.1392	20576.7773	0.93	

LANDUSE:

Range-Brush --> RNGB	239.7004	592.3117	0.03	2.88
Pasture --> PAST	541.7767	1338.7574	0.06	6.51
Range-Grasses --> RNGE	4.1110	10.1584	0.00	0.05
Water --> WATR	469.4397	1160.0090	0.05	5.64
Wetlands-Forested --> WETF	657.9113	1625.7317	0.07	7.90
Wetlands-Mixed --> WETL	322.1567	796.0654	0.04	3.87
Forest-Deciduous --> FRSD	35.7337	88.2998	0.00	0.43
Forest-Evergreen --> FRSE	4871.0100	12036.5093	0.54	58.50
Forest-Mixed --> FRST	650.0056	1606.1963	0.07	7.81
Residential-Low Density --> URLD	527.7046	1303.9845	0.06	6.34

Table11-95

Residential-Medium Density --> URMD	7.5895	18.7539	0.00	0.09
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SOIL:

ROSENWALL	526.9931	1302.2263	0.06	6.33
DIBOLL	393.7032	972.8603	0.04	4.73
ETOILE	11.7795	29.1077	0.00	0.14
HERTY	537.4286	1328.0130	0.06	6.45
RENTZEL	15.4161	38.0939	0.00	0.19
RAYLAKE	43.2441	106.8584	0.00	0.52
KEITHVILLE	46.9598	116.0400	0.01	0.56
ALAZAN	1414.0112	3494.0923	0.16	16.98
BERNALDO	786.8530	1944.3532	0.09	9.45
MOSWELL	2427.5203	5998.5239	0.27	29.15
POPHERS	334.5687	826.7359	0.04	4.02
KOURY	118.0319	291.6627	0.01	1.42
WATER	656.3301	1621.8246	0.07	7.88
LILBERT	40.1609	99.2396	0.00	0.48
SACUL	337.0985	832.9872	0.04	4.05
FULLER	32.5714	80.4856	0.00	0.39
TENAHA	212.7420	525.6962	0.02	2.55
MOLLVILLE	54.3911	134.4032	0.01	0.65
DARCO	102.8530	254.1549	0.01	1.24
KURTH	98.4258	243.2151	0.01	1.18
KELTYS	136.0569	336.2033	0.02	1.63

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	86	14317.5952	35379.4936	1.60	

LANDUSE:

Range-Brush --> RNGB	561.2325	1386.8335	0.06	3.92
Pasture --> PAST	757.8773	1872.7527	0.08	5.29
Range-Grasses --> RNGE	8.3023	20.5153	0.00	0.06
Water --> WATR	395.8199	978.0908	0.04	2.76
Wetlands-Forested --> WETF	4210.5876	10404.5726	0.47	29.41
SR319 Pasture, no litter --> TBPA	3.4790	8.5969	0.00	0.02
Wetlands-Mixed --> WETL	341.8948	844.8391	0.04	2.39
TPMV, SR319 Pasture --> TPMV	28.1486	69.5566	0.00	0.20
TPHH, SR319 Pasture --> TPHH	28.7021	70.9243	0.00	0.20
Forest-Deciduous --> FRSD	60.0925	148.4916	0.01	0.42
Forest-Evergreen --> FRSE	6470.6197	15989.2248	0.72	45.19
Forest-Mixed --> FRST	881.4623	2178.1374	0.10	6.16

Table11-96

Residential-Low Density --> URLD	568.0324	1403.6365	0.06	3.97
Residential-Medium Density --> URMD	1.3442	3.3215	0.00	0.01

SOIL:

MANTACHIE	2157.0050	5330.0672	0.24	15.07
MARIETTA	941.0804	2325.4568	0.11	6.57
BERNALDO	608.1995	1502.8914	0.07	4.25
KULLIT	986.2289	2437.0208	0.11	6.89
SACUL	9625.0814	23784.0574	1.08	67.23

		Area [ha]	Area [acres]	%Wat.	Area %Sub.	Area %Sub.
SUBBASIN #	87	7305.0920	18051.2476	0.82		

LANDUSE:

Range-Brush --> RNGB	583.3005	1441.3648	0.07	7.98
SR319 - Poultry Headquarters --> TBHQ	9.5662	23.6385	0.00	0.13
Pasture --> PAST	734.4622	1814.8927	0.08	10.05
Water --> WATR	23.7969	58.8033	0.00	0.33
Wetlands-Forested --> WETF	1814.3350	4483.3126	0.20	24.84
Wetlands-Mixed --> WETL	15.3375	37.8998	0.00	0.21
TPMH, SR319 Pasture --> TPMH	7.2735	17.9731	0.00	0.10
TPSS, SR319 Pasture --> TPSS	2.7671	6.8376	0.00	0.04
TPMV, SR319 Pasture --> TPMV	1.1859	2.9304	0.00	0.02
Forest-Deciduous --> FRSD	66.9633	165.4698	0.01	0.92
Forest-Evergreen --> FRSE	3161.0335	7811.0718	0.35	43.27
TPHM, SR319 Pasture --> TPHM	2.7671	6.8376	0.00	0.04
Forest-Mixed --> FRST	477.1237	1178.9965	0.05	6.53
TPVH, SR319 Pasture --> TPVH	18.1837	44.9328	0.00	0.25
Residential-Low Density --> URLD	380.6712	940.6575	0.04	5.21
Residential-Medium Density --> URMD	1.8974	4.6886	0.00	0.03
SR 319 Hayland - no litter --> TBHA	4.4273	10.9402	0.00	0.06

SOIL:

MANTACHIE	609.2320	1505.4428	0.07	8.34
MARIETTA	1.1068	2.7350	0.00	0.02
BERNALDO	20.0020	49.4260	0.00	0.27
KULLIT	1016.7834	2512.5227	0.11	13.92
SACUL	5420.2360	13393.6741	0.61	74.20
MOLLVILLE	237.7317	587.4470	0.03	3.25

Table11-97

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	88	870.4952	2151.0372	0.10		
LANDUSE:						
Range-Brush --> RNGB		2.9288	7.2373	0.00	0.34	
Pasture --> PAST		8.2324	20.3426	0.00	0.95	
Range-Grasses --> RNGE		2.3747	5.8681	0.00	0.27	
Water --> WATR		556.8731	1376.0613	0.06	63.97	
Wetlands-Forested --> WETF		5.0661	12.5185	0.00	0.58	
Wetlands-Mixed --> WETL		39.4204	97.4099	0.00	4.53	
Forest-Evergreen --> FRSE		206.4428	510.1305	0.02	23.72	
Forest-Mixed --> FRST		29.5258	72.9596	0.00	3.39	
Residential-Low Density --> URLD		18.7603	46.3577	0.00	2.16	
Residential-Medium Density --> URMD		0.8707	2.1516	0.00	0.10	
SOIL:						
KEITHVILLE		11.7945	29.1447	0.00	1.35	
BERNALDO		408.2153	1008.7204	0.05	46.89	
MOSWELL		55.7269	137.7039	0.01	6.40	
WATER		174.8590	432.0852	0.02	20.09	
SACUL		219.8996	543.3829	0.02	25.26	

SUBBASIN #	89	8263.8936	20420.4943	0.92		
LANDUSE:						
Residential-High Density --> URHD		1.2649	3.1257	0.00	0.02	
Range-Brush --> RNGB		283.4243	700.3556	0.03	3.43	
Pasture --> PAST		783.3104	1935.5993	0.09	9.48	
Range-Grasses --> RNGE		1.4231	3.5164	0.00	0.02	
Water --> WATR		209.8209	518.4780	0.02	2.54	
Wetlands-Forested --> WETF		1594.1332	3939.1829	0.18	19.29	
Wetlands-Mixed --> WETL		288.0097	711.6863	0.03	3.49	
Forest-Deciduous --> FRSD		28.6982	70.9147	0.00	0.35	
Forest-Evergreen --> FRSE		3927.2251	9704.3696	0.44	47.52	
Forest-Mixed --> FRST		685.1990	1693.1610	0.08	8.29	
Residential-Low Density --> URLD		455.9297	1126.6251	0.05	5.52	
Residential-Medium Density --> URMD		5.4550	13.4796	0.00	0.07	
SOIL:						

Table11-98

BERNALDO	447.1542	1104.9404	0.05	5.41
SACUL	7816.7394	19315.5539	0.87	94.59
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SUBBASIN #	90	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
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LANDUSE:				
Residential-High Density --> URHD	11.3915	28.1491	0.00	0.12
Range-Brush --> RNGB	474.7270	1173.0741	0.05	5.10
Pasture --> PAST	543.4718	1342.9461	0.06	5.84
Range-Grasses --> RNGE	8.3063	20.5254	0.00	0.09
Water --> WATR	179.1796	442.7617	0.02	1.93
Wetlands-Forested --> WETF	1887.1209	4663.1701	0.21	20.29
Wetlands-Mixed --> WETL	307.2554	759.2434	0.03	3.30
Forest-Deciduous --> FRSD	2.2941	5.6689	0.00	0.02
Forest-Evergreen --> FRSE	5116.3878	12642.8500	0.57	55.02
Forest-Mixed --> FRST	258.4458	638.6324	0.03	2.78
Residential-Low Density --> URLD	477.1793	1179.1340	0.05	5.13
Residential-Medium Density --> URMD	34.0164	84.0563	0.00	0.37
<hr/>				
SOIL:				
BERNALDO	420.1425	1038.1931	0.05	4.52
SACUL	8879.6335	21942.0184	0.99	95.48
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SUBBASIN #	91	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
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LANDUSE:				
Range-Brush --> RNGB	521.0759	1287.6045	0.06	7.59
Pasture --> PAST	631.4418	1560.3243	0.07	9.20
Range-Grasses --> RNGE	2.4508	6.0561	0.00	0.04
Water --> WATR	3.5576	8.7911	0.00	0.05
Wetlands-Forested --> WETF	1013.4534	2504.2941	0.11	14.77
Wetlands-Mixed --> WETL	5.8503	14.4565	0.00	0.09
Forest-Deciduous --> FRSD	19.8437	49.0349	0.00	0.29
Forest-Evergreen --> FRSE	4003.0581	9891.7567	0.45	58.32
Forest-Mixed --> FRST	433.3998	1070.9525	0.05	6.31
Residential-Low Density --> URLD	228.0843	563.6078	0.03	3.32
Residential-Medium Density --> URMD	1.2649	3.1257	0.00	0.02

Table11-99

SOIL:

TAHOULA	83.8813	207.2748	0.01	1.22
BERNALDO	3.3205	8.2050	0.00	0.05
TEHRAN	1797.9529	4442.8315	0.20	26.20
KIRVIN	1249.9180	3088.6099	0.14	18.21
RAYBURN	448.5000	1108.2659	0.05	6.53
CORRIGAN	251.5648	621.6291	0.03	3.67
SACUL	504.7898	1247.3608	0.06	7.35
LETNEY	682.2766	1685.9395	0.08	9.94
IUKA	522.2618	1290.5349	0.06	7.61
BROWNDELL	47.1190	116.4334	0.01	0.69
KISATCHIE	1271.8963	3142.9194	0.14	18.53

SUBBASIN #	92	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		9047.1896	22356.0579	1.01	

LANDUSE:

Residential-High Density --> URHD	6.6255	16.3720	0.00	0.07
Range-Brush --> RNGB	665.8032	1645.2330	0.07	7.36
Pasture --> PAST	1163.6799	2875.5112	0.13	12.86
Range-Grasses --> RNGE	2.6502	6.5488	0.00	0.03
Water --> WATR	189.1281	467.3450	0.02	2.09
Wetlands-Forested --> WETF	1438.4577	3554.5010	0.16	15.90
Wetlands-Mixed --> WETL	209.4865	517.6516	0.02	2.32
Forest-Deciduous --> FRSD	17.9491	44.3531	0.00	0.20
Forest-Evergreen --> FRSE	3927.9617	9706.1899	0.44	43.42
Forest-Mixed --> FRST	453.0642	1119.5443	0.05	5.01
Residential-Low Density --> URLD	940.7015	2324.5204	0.11	10.40
Residential-Medium Density --> URMD	31.6820	78.2877	0.00	0.35

SOIL:

MANTACHIE	288.0288	711.7337	0.03	3.18
BERNALDO	300.1957	741.7985	0.03	3.32
SACUL	8458.9651	20902.5256	0.95	93.50

SUBBASIN #	93	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		1721.4634	4253.8221	0.19	

Table11-100

LANDUSE:

Residential-High Density --> URHD	1.0291	2.5429	0.00	0.06
Range-Brush --> RNGB	103.6187	256.0470	0.01	6.02
Pasture --> PAST	52.0864	128.7081	0.01	3.03
Range-Grasses --> RNGE	8.7866	21.7122	0.00	0.51
Water --> WATR	293.5995	725.4990	0.03	17.06
Wetlands-Forested --> WETF	123.0126	303.9702	0.01	7.15
Wetlands-Mixed --> WETL	189.1892	467.4960	0.02	10.99
Forest-Evergreen --> FRSE	746.4662	1844.5552	0.08	43.36
Forest-Mixed --> FRST	82.3250	203.4292	0.01	4.78
Residential-Low Density --> URLD	118.4214	292.6251	0.01	6.88
Residential-Medium Density --> URMD	2.9289	7.2374	0.00	0.17

SOIL:

TAHOULA	51.2157	126.5564	0.01	2.98
MANTACHIE	20.5021	50.6617	0.00	1.19
BERNALDO	406.2422	1003.8449	0.05	23.60
TEHRAN	69.9763	172.9148	0.01	4.06
KIRVIN	488.8839	1208.0565	0.05	28.40
RAYBURN	243.6504	602.0722	0.03	14.15
SACUL	296.8450	733.5188	0.03	17.24
LETNEY	67.6807	167.2423	0.01	3.93
BROWNDELL	0.1583	0.3912	0.00	0.01
KISATCHIE	34.3549	84.8926	0.00	2.00
NIKFUL	41.9541	103.6707	0.00	2.44

SUBBASIN #

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
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94 9856.9688 24357.0628 1.10

LANDUSE:

Residential-High Density --> URHD	0.7906	1.9536	0.00	0.01
Range-Brush --> RNGB	552.7789	1365.9444	0.06	5.61
Pasture --> PAST	382.8026	945.9243	0.04	3.88
Range-Grasses --> RNGE	52.8113	130.4993	0.01	0.54
Water --> WATR	1929.4294	4767.7164	0.22	19.57
Wetlands-Forested --> WETF	1310.3992	3238.0619	0.15	13.29
Wetlands-Mixed --> WETL	893.0479	2206.7660	0.10	9.06
Forest-Deciduous --> FRSD	4.2692	10.5493	0.00	0.04
Forest-Evergreen --> FRSE	4025.2774	9946.6618	0.45	40.84
Forest-Mixed --> FRST	249.7467	617.1365	0.03	2.53
Residential-Low Density --> URLD	447.0774	1104.7505	0.05	4.54

Table11-101

Residential-Medium Density --> URMD	8.5383	21.0987	0.00	0.09
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SOIL:

MANTACHIE	247.4540	611.4711	0.03	2.51
MARIETTA	1884.4449	4656.5576	0.21	19.12
BERNALDO	2552.0172	6306.1621	0.29	25.89
WATER	9.0918	22.4662	0.00	0.09
SACUL	5163.9610	12760.4057	0.58	52.39

		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	95	19530.4464	48260.7096	2.18	

LANDUSE:

Residential-High Density --> URHD	3.3994	8.4002	0.00	0.02
Range-Brush --> RNGB	1511.0930	3733.9864	0.17	7.74
Pasture --> PAST	1080.8655	2670.8728	0.12	5.53
Range-Grasses --> RNGE	150.8405	372.7344	0.02	0.77
Water --> WATR	4370.9753	10800.8985	0.49	22.38
Wetlands-Forested --> WETF	1612.0486	3983.4528	0.18	8.25
Wetlands-Mixed --> WETL	851.9168	2105.1291	0.10	4.36
Forest-Deciduous --> FRSD	10.1983	25.2006	0.00	0.05
Forest-Evergreen --> FRSE	7914.1461	19556.2507	0.89	40.52
Forest-Mixed --> FRST	776.0222	1917.5898	0.09	3.97
Residential-Low Density --> URLD	1235.7379	3053.5702	0.14	6.33
Residential-Medium Density --> URMD	13.2025	32.6240	0.00	0.07

SOIL:

TAHOULA	344.4508	851.1551	0.04	1.76
MANTACHIE	381.6075	942.9712	0.04	1.95
NEWCO	28.3024	69.9365	0.00	0.14
MELHOMES	199.1443	492.0954	0.02	1.02
DOUCETTE	16.1276	39.8521	0.00	0.08
BERNALDO	3155.3178	7796.9481	0.35	16.16
TEHRAN	1834.2775	4532.5914	0.21	9.39
WATER	1800.9155	4450.1523	0.20	9.22
KIRVIN	431.3343	1065.8486	0.05	2.21
CORRIGAN	443.5090	1095.9330	0.05	2.27
SACUL	5891.1599	14557.3506	0.66	30.16
RAYBURN	1336.5354	3302.6459	0.15	6.84
LETNEY	1252.5771	3095.1805	0.14	6.41
URLAND	8.6172	21.2935	0.00	0.04

Table11-102

BONWIER	46.0111	113.6957	0.01	0.24
IUKA	522.2497	1290.5051	0.06	2.67
BROWNDELL	313.5395	774.7719	0.04	1.61
NIKFUL	96.7656	239.1127	0.01	0.50
KISATCHIE	1428.0042	3528.6699	0.16	7.31
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SUBBASIN #	96	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
		30944.8352	76466.2350	3.46
LANDUSE:				
Residential-High Density --> URHD	11.4632	28.3263	0.00	0.04
Range-Brush --> RNGB	436.3939	1078.3512	0.05	1.41
Pasture --> PAST	314.0139	775.9440	0.04	1.01
Range-Grasses --> RNGE	549.3662	1357.5113	0.06	1.78
Water --> WATR	13491.6082	33338.4384	1.51	43.60
Wetlands-Forested --> WETF	1030.0320	2545.2605	0.12	3.33
Wetlands-Mixed --> WETL	1623.5909	4011.9744	0.18	5.25
Forest-Deciduous --> FRSD	28.6976	70.9133	0.00	0.09
Forest-Evergreen --> FRSE	11966.1268	29568.8977	1.34	38.67
Forest-Mixed --> FRST	602.6505	1489.1796	0.07	1.95
Residential-Low Density --> URLD	873.2622	2157.8745	0.10	2.82
Residential-Medium Density --> URMD	17.6297	43.5638	0.00	0.06
SOIL:				
ROSENWALL	1712.6090	4231.9424	0.19	5.53
DIBOLL	45.1415	111.5468	0.01	0.15
MELHOMES	147.0458	363.3575	0.02	0.48
DAMS	0.7906	1.9535	0.00	0.00
ATTOYAC	26.7212	66.0295	0.00	0.09
HERTY	241.7559	597.3909	0.03	0.78
ETOILE	22.5312	55.6757	0.00	0.07
RAYLAKE	727.0070	1796.4706	0.08	2.35
MARIETTA	2283.1624	5641.8084	0.26	7.38
DOUCETTE	1.1068	2.7349	0.00	0.00
ALAZAN	741.9487	1833.3924	0.08	2.40
KEITHVILLE	211.2400	521.9845	0.02	0.68
BERNALDO	5536.5898	13681.1901	0.62	17.89
KOURY	135.8988	335.8126	0.02	0.44
MOSWELL	814.5229	2012.7269	0.09	2.63
TEHRAN	572.9251	1415.7267	0.06	1.85
WATER	9781.4693	24170.4997	1.09	31.61

Table11-103

CORRIGAN	107.6755	266.0714	0.01	0.35
SACUL	5915.5884	14617.7147	0.66	19.12
RAYBURN	448.8849	1109.2170	0.05	1.45
LETNEY	634.0361	1566.7349	0.07	2.05
KURTH	368.4841	910.5426	0.04	1.19
BROWNDELL	5.6921	14.0655	0.00	0.02
KELTYS	199.6186	493.2675	0.02	0.65
STRINGTOWN	163.7268	404.5771	0.02	0.53
MOTEN	50.0430	123.6588	0.01	0.16
KISATCHIE	48.6200	120.1424	0.01	0.16
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	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	97	3189.4704	7881.3408	0.36
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LANDUSE:				
Residential-High Density --> URHD	34.6630	85.6540	0.00	1.09
Range-Brush --> RNGB	345.7594	854.3888	0.04	10.84
SR319 - Poultry Headquarters --> TBHO	5.3023	13.1023	0.00	0.17
Pasture --> PAST	710.5914	1755.9069	0.08	22.28
Range-Grasses --> RNGE	7.1225	17.6001	0.00	0.22
Water --> WATR	24.1375	59.6449	0.00	0.76
Wetlands-Forested --> WETF	618.5524	1528.4740	0.07	19.39
SR319 Pasture, no litter --> TBPA	13.6120	33.6358	0.00	0.43
Wetlands-Mixed --> WETL	6.2520	15.4490	0.00	0.20
Forest-Deciduous --> FRSD	88.3194	218.2417	0.01	2.77
Forest-Evergreen --> FRSE	244.0655	603.0980	0.03	7.65
Forest-Mixed --> FRST	457.2666	1129.9287	0.05	14.34
Residential-Low Density --> URLD	552.7086	1365.7705	0.06	17.33
Residential-Medium Density --> URMD	81.1177	200.4460	0.01	2.54
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SOIL:				
RENTZEL	216.2876	534.4575	0.02	6.78
ATTOYAC	274.4549	678.1919	0.03	8.61
BERNALDO	61.3329	151.5567	0.01	1.92
PITS	3.2447	8.0178	0.00	0.10
OSIER	56.1889	138.8455	0.01	1.76
KIRVIN	133.1914	329.1225	0.01	4.18
WATER	14.4033	35.5914	0.00	0.45
SACUL	41.7064	103.0586	0.00	1.31
LILBERT	881.6113	2178.5057	0.10	27.64
TENAHA	157.3288	388.7674	0.02	4.93

Table11-104

CUTHBERT	263.6129	651.4006	0.03	8.27
DARCO	443.1007	1094.9240	0.05	13.89
BOWIE	64.1028	158.4012	0.01	2.01
MOLLVILLE	22.7921	56.3204	0.00	0.71
NACOGDOCHES	1.1079	2.7378	0.00	0.03
WODEN	20.4971	50.6493	0.00	0.64
HANNAHATCHEE	110.9532	274.1710	0.01	3.48
IUKA	116.6513	288.2511	0.01	3.66
LANDFILL	24.1375	59.6449	0.00	0.76
TUSCOSO	204.5750	505.5150	0.02	6.41
MISCELLANEOUS	22.7130	56.1249	0.00	0.71
TRAWICK	55.4766	137.0855	0.01	1.74

SUBBASIN #	98	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		5238.6244	12944.9028	0.59	

LANDUSE:

Residential-High Density --> URHD	165.9804	410.1460	0.02	3.17
Range-Brush --> RNGB	196.2665	484.9844	0.02	3.75
SR319 - Poultry Headquarters --> TBHQ	12.4149	30.6779	0.00	0.24
Pasture --> PAST	1299.9298	3212.1914	0.15	24.81
Range-Grasses --> RNGE	4.2701	10.5516	0.00	0.08
Water --> WATR	2.5304	6.2528	0.00	0.05
Wetlands-Forested --> WETF	657.9120	1625.7335	0.07	12.56
Wetlands-Mixed --> WETL	0.4745	1.1724	0.00	0.01
TPHH, SR319 Pasture --> TPHH	7.5122	18.5631	0.00	0.14
Forest-Deciduous --> FRSD	97.2634	240.3428	0.01	1.86
Forest-Evergreen --> FRSE	168.5900	416.5942	0.02	3.22
Forest-Mixed --> FRST	481.7308	1190.3808	0.05	9.20
Residential-Low Density --> URLD	1815.1097	4485.2267	0.20	34.65
TPVH, SR319 Pasture --> TPVH	29.8116	73.6660	0.00	0.57
TPVV, SR319 Pasture --> TPVV	2.2932	5.6666	0.00	0.04
Residential-Medium Density --> URMD	296.5349	732.7525	0.03	5.66

SOIL:

RUSTON	116.3998	287.6298	0.01	2.22
RENTZEL	117.1906	289.5838	0.01	2.24
ATTOYAC	257.3132	635.8337	0.03	4.91
BERNALDO	40.0915	99.0681	0.00	0.77
CHIRENO	38.2728	94.5739	0.00	0.73
BRILEY	8.3030	20.5171	0.00	0.16

Table11-105

PITS	3.4793	8.5976	0.00	0.07
WATER	3.3212	8.2068	0.00	0.06
OSIER	51.4785	127.2058	0.01	0.98
KIRVIN	200.8529	496.3177	0.02	3.83
SACUL	12.8103	31.6549	0.00	0.24
LILBERT	1066.5766	2635.5641	0.12	20.36
CUTHBERT	24.8299	61.3558	0.00	0.47
TENAHA	301.2003	744.2811	0.03	5.75
BOWIE	48.1573	118.9990	0.01	0.92
DARCO	728.6059	1800.4217	0.08	13.91
MOLLVILLE	5.0609	12.5056	0.00	0.10
NACOGDOCHES	789.7316	1951.4664	0.09	15.08
WODEN	15.2617	37.7123	0.00	0.29
ALTO	21.1133	52.1720	0.00	0.40
BIENVILLE	6.4052	15.8275	0.00	0.12
IUKA	11.3869	28.1377	0.00	0.22
HANNAHATCHEE	620.4300	1533.1136	0.07	11.84
LANDFILL	7.9867	19.7355	0.00	0.15
TONKAWA	65.4749	161.7917	0.01	1.25
BETIS	51.5575	127.4012	0.01	0.98
TRAWICK	625.3327	1545.2284	0.07	11.94

SUBBASIN #	99	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
		19308.9296	47713.3305	2.16	
LANDUSE:					
Residential-High Density	--> URHD	1.1859	2.9303	0.00	0.01
Range-Brush	--> RNGB	1733.0057	4282.3437	0.19	8.98
Pasture	--> PAST	5361.8743	13249.4594	0.60	27.77
Range-Grasses	--> RNGE	0.4743	1.1721	0.00	0.00
Water	--> WATR	44.9043	110.9608	0.01	0.23
Wetlands-Forested	--> WETF	2335.3400	5770.7419	0.26	12.09
SR319 Pasture, no litter	--> TBPA	22.2940	55.0897	0.00	0.12
Wetlands-Mixed	--> WETL	3.5576	8.7909	0.00	0.02
TPML, SR319 Pasture	--> TPML	35.9709	88.8858	0.00	0.19
Forest-Deciduous	--> FRSD	3039.3415	7510.3647	0.34	15.74
Forest-Evergreen	--> FRSE	2912.0599	7195.8456	0.33	15.08
Forest-Mixed	--> FRST	2536.9350	6268.8933	0.28	13.14
Residential-Low Density	--> URLD	994.8517	2458.3283	0.11	5.15
TPVL, SR319 Pasture	--> TPVL	64.9847	160.5806	0.01	0.34
Agricultural Land-Row Crops	--> AGRR	217.0902	536.4407	0.02	1.12

Table11-106

Residential-Medium Density --> URMD	5.0596	12.5026	0.00	0.03
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SOIL:

Ochlockonee	146.5714	362.1854	0.02	0.76
Mantachie	1509.1957	3729.2980	0.17	7.82
Ruston	46.3273	114.4771	0.01	0.24
Marietta	110.2843	272.5181	0.01	0.57
Alazan	41.5049	102.5606	0.00	0.21
Woodtell	203.4924	502.8399	0.02	1.05
Briley	112.7351	278.5741	0.01	0.58
Percilla	67.3565	166.4412	0.01	0.35
Water	23.9542	59.1921	0.00	0.12
Lilbert	797.5257	1970.7260	0.09	4.13
Sacul	3610.2902	8921.2076	0.40	18.70
Elrose	2402.6174	5936.9878	0.27	12.44
Cuthbert	595.6935	1471.9885	0.07	3.09
Tenaha	65.3010	161.3620	0.01	0.34
Darco	785.9834	1942.2043	0.09	4.07
Bowie	2775.1334	6857.4934	0.31	14.37
Nacogdoches	1617.5827	3997.1277	0.18	8.38
Iuka	1289.7338	3186.9968	0.14	6.68
Bienville	188.9459	466.8948	0.02	0.98
Hannahatchee	432.0458	1067.6068	0.05	2.24
Tuscosso	3.3204	8.2048	0.00	0.02
Bub	793.0195	1959.5908	0.09	4.11
Trawick	955.0070	2359.8701	0.11	4.95
Betis	735.3080	1816.9828	0.08	3.81

SUBBASIN #	100	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
			1324.0445	3271.7802	0.15

LANDUSE:

Range-Brush --> RNGB	62.9628	155.5842	0.01	4.76
Pasture --> PAST	204.6886	505.7957	0.02	15.46
Water --> WATR	2.6995	6.6707	0.00	0.20
Wetlands-Forested --> WETF	441.9304	1092.0322	0.05	33.38
Wetlands-Mixed --> WETL	3.8111	9.4175	0.00	0.29
Forest-Deciduous --> FRSD	106.7906	263.8849	0.01	8.07
Forest-Evergreen --> FRSE	266.9368	659.6141	0.03	20.16
Forest-Mixed --> FRST	181.4249	448.3100	0.02	13.70
Residential-Low Density --> URLD	52.7998	130.4710	0.01	3.99

Table11-107

SOIL:

Mantachie	322.9919	798.1291	0.04	24.39
ATTOYAC	121.7175	300.7699	0.01	9.19
Derly	0.2382	0.5886	0.00	0.02
BERNALDO	78.7630	194.6274	0.01	5.95
Sawlit	2.6201	6.4745	0.00	0.20
KULLIT	11.6715	28.8409	0.00	0.88
KIRVIN	35.4910	87.7000	0.00	2.68
Water	18.7380	46.3025	0.00	1.42
LaCerda	6.3519	15.6958	0.00	0.48
Lilbert	6.8282	16.8729	0.00	0.52
Sacul	383.4139	947.4350	0.04	28.96
Ulto	6.9870	17.2653	0.00	0.53
Cuthbert	69.5528	171.8685	0.01	5.25
Mattex	7.3840	18.2463	0.00	0.56
MOLLVILLE	6.4313	15.8920	0.00	0.49
Bowie	174.8349	432.0257	0.02	13.20
ANGELINA	26.7572	66.1184	0.00	2.02
WODEN	8.3368	20.6007	0.00	0.63
Iuka	30.5683	75.5358	0.00	2.31
BIENVILLE	4.3669	10.7908	0.00	0.33

SUBBASIN #	101	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		908.1263	2244.0255	0.10	

LANDUSE:

Range-Brush	--> RNGB	34.4407	85.1047	0.00	3.79
SR319 - Poultry	Headquarters --> TBHQ	1.6627	4.1085	0.00	0.18
Pasture	--> PAST	497.0547	1228.2469	0.06	54.73
Water	--> WATR	10.2926	25.4336	0.00	1.13
Wetlands-Forested	--> WETF	217.9661	538.6052	0.02	24.00
SR319 Pasture, no litter	--> TBPA	1.1876	2.9346	0.00	0.13
Forest-Deciduous	--> FRSD	32.6989	80.8006	0.00	3.60
Forest-Evergreen	--> FRSE	55.4218	136.9501	0.01	6.10
Forest-Mixed	--> FRST	22.0104	54.3888	0.00	2.42
TPVH, SR319 Pasture	--> TPVH	1.6627	4.1085	0.00	0.18
Residential-Low Density	--> URLD	33.7281	83.3439	0.00	3.71

SOIL:

MANTACHIE	85.5871	211.4901	0.01	9.42
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Table11-108

LANEVILLE	46.3960	114.6468	0.01	5.11
RUSTON	6.8881	17.0209	0.00	0.76
ATTOYAC	38.8745	96.0607	0.00	4.28
MARIETTA	73.1568	180.7742	0.01	8.06
DREKA	135.7043	335.3321	0.02	14.94
BERNALDO	19.0809	47.1500	0.00	2.10
WATER	8.6300	21.3251	0.00	0.95
KIRVIN	85.2704	210.7075	0.01	9.39
LILBERT	64.2102	158.6665	0.01	7.07
SACUL	14.6472	36.1940	0.00	1.61
TENAHA	19.4768	48.1282	0.00	2.14
CUTHBERT	148.2138	366.2437	0.02	16.32
LATEX	9.0258	22.3033	0.00	0.99
DARCO	98.1758	242.5974	0.01	10.81
NACOGDOCHES	0.3167	0.7826	0.00	0.03
WODEN	17.0224	42.0633	0.00	1.87
METCALF	3.9587	9.7822	0.00	0.44
MABEN	11.1635	27.5857	0.00	1.23
GALLIME	1.9794	4.8911	0.00	0.22
TONKAWA	1.8210	4.4998	0.00	0.20
OWENTOWN	4.0379	9.9778	0.00	0.44
TRAWICK	14.4889	35.8027	0.00	1.60

SUBBASIN #	102	Area [ha]	Area [acres] %Wat.Area %Sub.Area		
			14104.5211	0.64	
LANDUSE:					
Residential-High Density --> URHD	411.9653	1017.9870	0.05	7.22	
Range-Brush --> RNGB	263.9709	652.2853	0.03	4.62	
Pasture --> PAST	231.3204	571.6043	0.03	4.05	
Range-Grasses --> RNGE	0.3953	0.9768	0.00	0.01	
Water --> WATR	19.0527	47.0802	0.00	0.33	
Wetlands-Forested --> WETF	540.5909	1335.8271	0.06	9.47	
Wetlands-Mixed --> WETL	0.3953	0.9768	0.00	0.01	
Forest-Deciduous --> FRSD	241.5978	597.0002	0.03	4.23	
Forest-Evergreen --> FRSE	382.6352	945.5108	0.04	6.70	
Forest-Mixed --> FRST	491.7337	1215.0986	0.05	8.61	
Residential-Low Density --> URLD	2343.3247	5790.4724	0.26	41.05	
Residential-Medium Density --> URMD	780.9238	1929.7017	0.09	13.68	

Table11-109

SOIL:

MANTACHIE	473.2344	1169.3859	0.05	8.29
URBAN	321.7615	795.0887	0.04	5.64
DERLY	82.2982	203.3630	0.01	1.44
PICKTON	889.7060	2198.5080	0.10	15.59
BERNALDO	29.8835	73.8436	0.00	0.52
BRILEY	16.2857	40.2428	0.00	0.29
OAKWOOD	390.8572	965.8276	0.04	6.85
PITS	3.0042	7.4234	0.00	0.05
WATER	22.3731	55.2850	0.00	0.39
KIRVIN	476.3967	1177.2001	0.05	8.35
SACUL	12.9653	32.0380	0.00	0.23
WOLFPEN	1627.3857	4021.3513	0.18	28.51
FREESTONE	183.8863	454.3922	0.02	3.22
TENAHA	15.8904	39.2660	0.00	0.28
ELROSE	3.9528	9.7677	0.00	0.07
RAINO	47.9875	118.5796	0.01	0.84
CUTHBERT	898.6394	2220.5830	0.10	15.74
BOWIE	8.4591	20.9028	0.00	0.15
REDSPRINGS	94.9473	234.6195	0.01	1.66
GALLIME	34.7850	85.9555	0.00	0.61
OWENTOWN	73.2067	180.8973	0.01	1.28

SUBBASIN #	103	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		7567.0864	18698.6488	0.85	

LANDUSE:

Residential-High Density	--> URHD	1.5021	3.7117	0.00	0.02
Range-Brush	--> RNGB	826.3815	2042.0299	0.09	10.92
SR319 - Poultry Headquarters	--> TBHQ	4.4272	10.9398	0.00	0.06
Pasture	--> PAST	1216.6062	3006.2947	0.14	16.08
Range-Grasses	--> RNGE	2.5298	6.2513	0.00	0.03
TPLH, SR319 Pastureland	--> TPLH	10.2774	25.3960	0.00	0.14
Water	--> WATR	16.0485	39.6568	0.00	0.21
Wetlands-Forested	--> WETF	563.7545	1393.0657	0.06	7.45
SR319 Pasture, no litter	--> TBPA	22.0569	54.5036	0.00	0.29
Wetlands-Mixed	--> WETL	0.5534	1.3675	0.00	0.01
TPMH, SR319 Pasture	--> TPMH	48.9362	120.9238	0.01	0.65
Forest-Deciduous	--> FRSD	917.6921	2267.6632	0.10	12.13
Forest-Evergreen	--> FRSE	2041.5646	5044.8082	0.23	26.98
Forest-Mixed	--> FRST	1359.9363	3360.4705	0.15	17.97

Table11-110

Residential-Low Density --> URLD	470.4674	1162.5485	0.05	6.22
Agricultural Land-Row Crops --> AGRR	60.8738	150.4222	0.01	0.80
Residential-Medium Density --> URMD	3.4785	8.5956	0.00	0.05

SOIL:

MANTACHIE	1.8974	4.6885	0.00	0.03
Laneville	409.9099	1012.9078	0.05	5.42
RUSTON	33.2039	82.0485	0.00	0.44
Attoyac	118.5062	292.8349	0.01	1.57
Rentzel	39.2913	97.0907	0.00	0.52
MARIETTA	413.7046	1022.2848	0.05	5.47
Bernaldo	115.5811	285.6068	0.01	1.53
BRILEY	63.0874	155.8921	0.01	0.83
Sawlit	364.6893	901.1656	0.04	4.82
PITS	23.7171	58.6060	0.00	0.31
KULLIT	14.6255	36.1404	0.00	0.19
Naconiche	8.3800	20.7075	0.00	0.11
Water	2.2136	5.4699	0.00	0.03
OSIER	8.2219	20.3168	0.00	0.11
KIRVIN	632.8502	1563.8046	0.07	8.36
Lilbert	551.3426	1362.3952	0.06	7.29
Sacul	988.0528	2441.5278	0.11	13.06
Ulto	34.5479	85.3695	0.00	0.46
Tenaha	298.4397	737.4594	0.03	3.94
Cuthbert	1012.5604	2502.0873	0.11	13.38
Mollville	0.4743	1.1721	0.00	0.01
Mattex	4.3481	10.7444	0.00	0.06
Darco	506.5174	1251.6297	0.06	6.69
Bowie	125.1470	309.2446	0.01	1.65
NACOGDOCHES	115.1068	284.4347	0.01	1.52
Woden	13.0444	32.2333	0.00	0.17
ALTO	21.8988	54.1129	0.00	0.29
IUKA	6.7198	16.6050	0.00	0.09
Hannahatchee	236.6963	584.8883	0.03	3.13
Bienville	11.4632	28.3263	0.00	0.15
Redsprings	939.2747	2320.9947	0.11	12.41
Meth	2.8460	7.0327	0.00	0.04
Betis	206.7337	510.8493	0.02	2.73
Iulus	47.8294	118.1889	0.01	0.63
TRAWICK	194.1637	479.7881	0.02	2.57

Table11-111

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	104	6747.8992	16674.3963	0.75		
LANDUSE:						
Residential-High Density --> URHD		15.5806	38.5004	0.00	0.23	
Range-Brush --> RNGB		657.9439	1625.8123	0.07	9.75	
Pasture --> PAST		2713.6330	6705.5229	0.30	40.21	
Water --> WATR		25.0713	61.9525	0.00	0.37	
Wetlands-Forested --> WETF		723.0344	1786.6541	0.08	10.71	
Wetlands-Mixed --> WETL		0.4745	1.1726	0.00	0.01	
Forest-Deciduous --> FRSD		685.7833	1694.6049	0.08	10.16	
Forest-Evergreen --> FRSE		607.8804	1502.1028	0.07	9.01	
Forest-Mixed --> FRST		631.2908	1559.9511	0.07	9.36	
Residential-Low Density --> URLD		448.1991	1107.5223	0.05	6.64	
Agricultural Land-Row Crops --> AGRR		223.7436	552.8817	0.03	3.32	
Residential-Medium Density --> URMD		15.2642	37.7187	0.00	0.23	
SOIL:						
Mantachie		412.4507	1019.1863	0.05	6.11	
Ruston		2.2936	5.6676	0.00	0.03	
Marietta		316.5945	782.3208	0.04	4.69	
Alazan		55.7580	137.7807	0.01	0.83	
Woodtell		128.2828	316.9933	0.01	1.90	
Briley		7.9089	19.5434	0.00	0.12	
Percilla		26.5740	65.6657	0.00	0.39	
Water		17.7951	43.9726	0.00	0.26	
Lilbert		337.7904	834.6970	0.04	5.01	
Sacul		1848.4752	4567.6745	0.21	27.39	
Elrose		86.3655	213.4135	0.01	1.28	
Cuthbert		95.2235	235.3021	0.01	1.41	
Tenaha		87.3937	215.9541	0.01	1.30	
Darco		636.4316	1572.6543	0.07	9.43	
Bowie		1868.8802	4618.0964	0.21	27.70	
Nacogdoches		182.0636	449.8882	0.02	2.70	
Alto		0.3164	0.7817	0.00	0.00	
Angelina		13.6824	33.8100	0.00	0.20	
Bienville		55.2043	136.4127	0.01	0.82	
Hannahatchee		27.6022	68.2063	0.00	0.41	
Iuka		411.7389	1017.4274	0.05	6.10	
Bub		28.7094	70.9424	0.00	0.43	
Trawick		35.1156	86.7725	0.00	0.52	
Betis		65.2487	161.2327	0.01	0.97	

Table11-112

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	105	17812.3040	44015.0938	1.99	
LANDUSE:					
Range-Brush --> RNGB	1737.6450	4293.8077	0.19	9.76	
SR319 - Poultry Headquarters --> TBHQ	15.4166	38.0951	0.00	0.09	
Pasture --> PAST	1892.7594	4677.1031	0.21	10.63	
Water --> WATR	33.9955	84.0046	0.00	0.19	
Wetlands-Forested --> WETF	2059.9699	5090.2886	0.23	11.56	
SR319 Pasture, no litter --> TBPA	11.3845	28.1318	0.00	0.06	
Wetlands-Mixed --> WETL	5.2970	13.0891	0.00	0.03	
TPMV, SR319 Pasture --> TPMV	54.7881	135.3842	0.01	0.31	
Forest-Deciduous --> FRSD	1953.2398	4826.5532	0.22	10.97	
Forest-Evergreen --> FRSE	6164.9674	15233.9427	0.69	34.61	
Forest-Mixed --> FRST	3113.9098	7694.6268	0.35	17.48	
Residential-Low Density --> URLD	689.3183	1703.3400	0.08	3.87	
Agricultural Land-Row Crops --> AGRR	78.9803	195.1642	0.01	0.44	
Residential-Medium Density --> URMD	0.6325	1.5629	0.00	0.00	
SOIL:					
Ochlockonee	7.1944	17.7777	0.00	0.04	
Mantachie	1104.1426	2728.3915	0.12	6.20	
Ruston	94.9503	234.6268	0.01	0.53	
RENTZEL	53.1279	131.2816	0.01	0.30	
ATTOYAC	112.1061	277.0198	0.01	0.63	
Marietta	840.5588	2077.0628	0.09	4.72	
Alazan	75.3435	186.1777	0.01	0.42	
Woodtell	71.7068	177.1911	0.01	0.40	
BERNALDO	359.7990	889.0813	0.04	2.02	
Briley	116.6125	288.1553	0.01	0.65	
Percilla	72.2602	178.5586	0.01	0.41	
OSIER	15.8119	39.0719	0.00	0.09	
KIRVIN	917.0092	2265.9755	0.10	5.15	
Water	85.7003	211.7698	0.01	0.48	
Lilbert	799.6851	1976.0619	0.09	4.49	
Sacul	4296.9536	10617.9872	0.48	24.12	
Elrose	846.4882	2091.7148	0.09	4.75	
TENAHA	584.4066	1444.0978	0.07	3.28	
Cuthbert	1349.0684	3333.6154	0.15	7.57	

Table11-113

MOLLYVILLE	316.9488	783.1965	0.04	1.78
Darco	442.1788	1092.6460	0.05	2.48
BOWIE	1876.0779	4635.8822	0.21	10.53
Nacogdoches	387.9441	958.6293	0.04	2.18
Alto	9.2499	22.8571	0.00	0.05
WODEN	15.8119	39.0719	0.00	0.09
ANGELINA	9.3290	23.0524	0.00	0.05
Hannahatchee	87.5977	216.4584	0.01	0.49
Bienville	514.3600	1271.0093	0.06	2.89
Iuka	1188.0245	2935.6680	0.13	6.67
Bub	474.8303	1173.3295	0.05	2.67
Betis	171.3216	423.3442	0.02	0.96
Trawick	515.7040	1274.3304	0.06	2.90

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	106	8068.9400	19938.7542	0.90	

LANDUSE:

Residential-High Density --> URHD	60.1623	148.6640	0.01	0.75
Range-Brush --> RNGB	495.2123	1223.6943	0.06	6.14
SR319 - Poultry Headquarters --> TBHQ	27.9071	68.9598	0.00	0.35
Pasture --> PAST	2919.5704	7214.4045	0.33	36.18
Range-Grasses --> RNGE	1.6602	4.1024	0.00	0.02
TPLH, SR319 Pastureland --> TPLH	64.3523	159.0177	0.01	0.80
Water --> WATR	10.8308	26.7634	0.00	0.13
Wetlands-Forested --> WETF	1620.9822	4005.5280	0.18	20.09
SR319 Pasture, no litter --> TBPA	12.2538	30.2798	0.00	0.15
Wetlands-Mixed --> WETL	1.4230	3.5164	0.00	0.02
TPMH, SR319 Pasture --> TPMH	43.8766	108.4212	0.00	0.54
TPMM, SR319 Pasture --> TPMM	12.0957	29.8891	0.00	0.15
TPMV, SR319 Pasture --> TPMV	2.1345	5.2745	0.00	0.03
Forest-Deciduous --> FRSD	331.8017	819.8986	0.04	4.11
Forest-Evergreen --> FRSE	474.9737	1173.6838	0.05	5.89
TPHL, SR319 Pasture --> TPHL	20.3176	50.2058	0.00	0.25
TPHM, SR319 Pasture --> TPHM	2.5298	6.2513	0.00	0.03
TPHV, SR319 Pasture --> TPHV	2.0555	5.0792	0.00	0.03
Forest-Mixed --> FRST	547.3898	1352.6276	0.06	6.78
Residential-Low Density --> URLD	1222.2193	3020.1650	0.14	15.15
TPVH, SR319 Pasture --> TPVH	0.4743	1.1721	0.00	0.01
TPVM, SR319 Pasture --> TPVM	4.0319	9.9630	0.00	0.05
Agricultural Land-Row Crops --> AGRR	25.9307	64.0759	0.00	0.32

Table11-114

TPVV, SR319 Pasture --> TPVV	6.1664	15.2376	0.00	0.08
Residential-Medium Density --> URMD	157.4022	388.9488	0.02	1.95
SR 319 Hayland - no litter --> TBHA	1.1859	2.9303	0.00	0.01

SOIL:

RUSTON	76.4480	188.9068	0.01	0.95
RENTZEL	45.7739	113.1097	0.01	0.57
ATTOYAC	280.5729	693.3095	0.03	3.48
BERNALDO	20.3176	50.2058	0.00	0.25
CHIRENO	23.8752	58.9968	0.00	0.30
BRILEY	19.3689	47.8616	0.00	0.24
PERCILLA	71.3093	176.2088	0.01	0.88
KULLIT	72.4161	178.9438	0.01	0.90
OSIER	3.2413	8.0095	0.00	0.04
KIRVIN	338.5215	836.5037	0.04	4.20
WATER	9.4868	23.4424	0.00	0.12
LACERDA	4.9806	12.3073	0.00	0.06
SACUL	358.8392	886.7095	0.04	4.45
LILBERT	380.0264	939.0642	0.04	4.71
CUTHBERT	40.1609	99.2396	0.00	0.50
TENAHA	102.9321	254.3502	0.01	1.28
BOWIE	131.4716	324.8729	0.01	1.63
DARCO	559.0902	1381.5399	0.06	6.93
NACOGDOCHES	2907.5538	7184.7107	0.33	36.03
ALTO	869.1513	2147.7163	0.10	10.77
HANNAHATCHEE	318.9154	788.0560	0.04	3.95
TUSCOSSO	514.4231	1271.1652	0.06	6.38
TRAWICK	920.0639	2273.5239	0.10	11.40

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	107	8363.6640	20667.0319	0.94	

LANDUSE:

Range-Brush --> RNGB	828.4676	2047.1848	0.09	9.91
SR319 - Poultry Headquarters --> TBHQ	23.5621	58.2230	0.00	0.28
Pasture --> PAST	1871.6820	4625.0199	0.21	22.38
Range-Grasses --> RNGE	1.2651	3.1261	0.00	0.02
Water --> WATR	13.7577	33.9960	0.00	0.16
Wetlands-Forested --> WETF	2078.9175	5137.1092	0.23	24.86
SR319 Pasture, no litter --> TBPA	23.0086	56.8554	0.00	0.28
Wetlands-Mixed --> WETL	3.3208	8.2059	0.00	0.04

Table11-115

TPMH, SR319 Pasture --> TPMH	107.0572	264.5436	0.01	1.28
TPMM, SR319 Pasture --> TPMM	58.1145	143.6038	0.01	0.69
TPSS, SR319 Pasture --> TPSS	0.0791	0.1954	0.00	0.00
TPMV, SR319 Pasture --> TPMV	16.6832	41.2250	0.00	0.20
TPHH, SR319 Pasture --> TPHH	40.7987	100.8157	0.00	0.49
Forest-Deciduous --> FRSD	192.2918	475.1626	0.02	2.30
Forest-Evergreen --> FRSE	2331.9330	5762.3231	0.26	27.88
TPHM, SR319 Pasture --> TPHM	22.9295	56.6600	0.00	0.27
TPHV, SR319 Pasture --> TPHV	1.8185	4.4937	0.00	0.02
Forest-Mixed --> FRST	452.2652	1117.5699	0.05	5.41
Residential-Low Density --> URLD	226.0535	558.5896	0.03	2.70
TPVH, SR319 Pasture --> TPVH	27.1201	67.0151	0.00	0.32
TPVM, SR319 Pasture --> TPVM	23.8783	59.0046	0.00	0.29
Agricultural Land-Row Crops --> AGRR	14.2321	35.1683	0.00	0.17
SR 319 Hayland - no litter --> TBHA	4.4278	10.9412	0.00	0.05

SOIL:

MANTACHIE	1564.5054	3865.9711	0.17	18.71
RUSTON	8.2230	20.3195	0.00	0.10
RENTZEL	50.7612	125.4335	0.01	0.61
ATTOYAC	138.7632	342.8908	0.02	1.66
MARIETTA	25.3806	62.7168	0.00	0.30
BERNALDO	23.3249	57.6369	0.00	0.28
WOODTELL	145.2467	358.9119	0.02	1.74
BRILEY	170.9436	422.4101	0.02	2.04
PERCILLA	2.7674	6.8383	0.00	0.03
KULLIT	39.2965	97.1035	0.00	0.47
OSIER	29.8084	73.6580	0.00	0.36
KIRVIN	91.9553	227.2262	0.01	1.10
WATER	884.9217	2186.6856	0.10	10.58
LILBERT	31.3107	77.3702	0.00	0.37
SACUL	206.9983	511.5031	0.02	2.47
TENAHA	69.0258	170.5662	0.01	0.83
CUTHBERT	4324.1927	10685.2965	0.48	51.70
BOWIE	20.6366	50.9940	0.00	0.25
MOLLVILLE	27.9898	69.1643	0.00	0.33
NACOGDOCHES	282.8239	698.8719	0.03	3.38
ALTO	76.3000	188.5411	0.01	0.91
IUKA	4.1115	10.1597	0.00	0.05
TUSCOSSO	17.5529	43.3742	0.00	0.21
TRAWICK	126.8240	313.3885	0.01	1.52

Table11-116

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	108	7227.7744	17860.1919	0.81		
LANDUSE:						
Range-Brush --> RNGB	424.2841	1048.4273	0.05	5.87		
SR319 - Poultry Headquarters --> TBHQ	43.6461	107.8516	0.00	0.60		
Pasture --> PAST	1243.9132	3073.7716	0.14	17.21		
Range-Grasses --> RNGE	3.0046	7.4246	0.00	0.04		
TPLH, SR319 Pastureland --> TPLH	15.8929	39.2721	0.00	0.22		
Water --> WATR	7.1162	17.5845	0.00	0.10		
Wetlands-Forested --> WETF	1934.4226	4780.0549	0.22	26.76		
SR319 Pasture, no litter --> TBPA	92.4316	228.4032	0.01	1.28		
Wetlands-Mixed --> WETL	3.4000	8.4015	0.00	0.05		
TPMH, SR319 Pasture --> TPMH	52.1065	128.7577	0.01	0.72		
TPMM, SR319 Pasture --> TPMM	18.0277	44.5474	0.00	0.25		
TPSS, SR319 Pasture --> TPSS	18.1068	44.7428	0.00	0.25		
TPMV, SR319 Pasture --> TPMV	43.6461	107.8516	0.00	0.60		
TPHH, SR319 Pasture --> TPHH	46.4926	114.8854	0.01	0.64		
Forest-Deciduous --> FRSD	89.5852	221.3694	0.01	1.24		
Forest-Evergreen --> FRSE	2441.4129	6032.8532	0.27	33.78		
TPHM, SR319 Pasture --> TPHM	34.7904	85.9687	0.00	0.48		
Forest-Mixed --> FRST	431.6376	1066.5980	0.05	5.97		
Residential-Low Density --> URLD	280.4577	693.0249	0.03	3.88		
TPVV, SR319 Pasture --> TPVV	0.0791	0.1954	0.00	0.00		
Residential-Medium Density --> URMD	3.3209	8.2061	0.00	0.05		
SOIL:						
MANTACHIE	1806.2517	4463.3384	0.20	24.99		
KULLIT	482.1626	1191.4480	0.05	6.67		
CUTHBERT	3099.0295	7657.8570	0.35	42.88		
MOLLVILLE	1840.3305	4547.5486	0.21	25.46		

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	109	4392.8740	10855.0113	0.49		
LANDUSE:						
Range-Brush --> RNGB	424.2852	1048.4299	0.05	9.66		
Pasture --> PAST	370.0336	914.3716	0.04	8.42		
Water --> WATR	797.1658	1969.8366	0.09	18.15		
Wetlands-Forested --> WETF	79.6375	196.77882	0.01	1.81		

Table11-117

Forest-Deciduous --> FRSD	266.9873	659.7389	0.03	6.08
Forest-Evergreen --> FRSE	1482.4279	3663.1535	0.17	33.75
Forest-Mixed --> FRST	795.9796	1966.9053	0.09	18.12
Residential-Low Density --> URLD	175.0127	432.4651	0.02	3.98
Residential-Medium Density --> URMD	1.3444	3.3221	0.00	0.03

SOIL:

RUSTON	102.6509	253.6555	0.01	2.34
RENTZEL	23.8833	59.0169	0.00	0.54
ATTOYAC	92.2118	227.8601	0.01	2.10
BERNALDO	19.3756	47.8780	0.00	0.44
CHIRENO	0.8699	2.1496	0.00	0.02
BRILEY	59.5502	147.1515	0.01	1.36
KIRVIN	510.1703	1260.6563	0.06	11.61
WATER	775.4968	1916.2914	0.09	17.65
LILBERT	39.1465	96.7330	0.00	0.89
SACUL	366.3958	905.3822	0.04	8.34
TENAHA	221.1977	546.5906	0.02	5.04
CUTHBERT	391.4654	967.3305	0.04	8.91
MOLLVILLE	32.6617	80.7086	0.00	0.74
DARCO	126.9297	313.6496	0.01	2.89
BOWIE	7.1176	17.5878	0.00	0.16
DAM	9.0156	22.2779	0.00	0.21
NACOGDOCHES	640.5006	1582.7090	0.07	14.58
WODEN	3.8751	9.5756	0.00	0.09
ALTO	88.1786	217.8936	0.01	2.01
HANNAHATCHEE	42.0726	103.9636	0.00	0.96
IUKA	59.0757	145.9790	0.01	1.34
TUSCOSSO	10.0437	24.8184	0.00	0.23
BETIS	229.4224	566.9143	0.03	5.22
TRAWICK	541.5666	1338.2382	0.06	12.33

SUBBASIN #	110	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
		6821.3432	16855.8801	0.76	
LANDUSE:					
SR319 - Poultry Headquarters --> TBHQ	713.1131	1762.1382	0.08	10.45	
Pasture --> PAST	21.6646	53.5343	0.00	0.32	
Range-Grasses --> RNGE	1639.7885	4051.9995	0.18	24.04	
TPLH, SR319 Pastureland --> TPLH	1.5023	3.7122	0.00	0.02	
	33.5248	82.8414	0.00	0.49	

Table11-118

	Water --> WATR	21.2693	52.5574	0.00	0.31
	Wetlands-Forested --> WETF	1375.5437	3399.0373	0.15	20.17
SR319	Pasture, no litter --> TBPA	99.2302	245.2027	0.01	1.45
	Wetlands-Mixed --> WETL	0.3953	0.9769	0.00	0.01
	TPMH, SR319 Pasture --> TPMH	28.4644	70.3370	0.00	0.42
	TPSS, SR319 Pasture --> TPSS	19.6088	48.4544	0.00	0.29
	TPHH, SR319 Pasture --> TPHH	61.9101	152.9831	0.01	0.91
	Forest-Deciduous --> FRSD	369.1679	912.2323	0.04	5.41
	Forest-Evergreen --> FRSE	1881.7362	4649.8643	0.21	27.59
	TPHM, SR319 Pasture --> TPHM	69.0262	170.5673	0.01	1.01
	Forest-Mixed --> FRST	273.8911	676.7986	0.03	4.02
	Residential-Low Density --> URLD	193.6372	478.4872	0.02	2.84
	TPVH, SR319 Pasture --> TPVH	15.6554	38.6854	0.00	0.23
SR 319	Hayland - no litter --> TBHA	2.2139	5.4707	0.00	0.03

SOIL:

LANEVILLE	1219.9382	3014.5282	0.14	17.88
HAINESVILLE	1.8186	4.4938	0.00	0.03
DREKA	0.0791	0.1954	0.00	0.00
ALAZAN	136.1549	336.4455	0.02	2.00
KIRVIN	236.0967	583.4066	0.03	3.46
WATER	19.5298	48.2590	0.00	0.29
SAWTOWN	12.6509	31.2609	0.00	0.19
SACUL	8.8556	21.8826	0.00	0.13
LILBERT	60.5660	149.6616	0.01	0.89
TENAHA	209.6089	517.9541	0.02	3.07
CUTHBERT	335.3268	828.6094	0.04	4.92
EASTWOOD	2346.4972	5798.3118	0.26	34.40
BOWIE	15.4973	38.2946	0.00	0.23
MOLLVILLE	1.2651	3.1261	0.00	0.02
DARCO	95.9884	237.1921	0.01	1.41
LATEX	30.8365	76.1985	0.00	0.45
METCALF	723.4710	1787.7330	0.08	10.61
MABEN	1120.7080	2769.3254	0.13	16.43
METH	101.9976	252.0410	0.01	1.50
GALLIME	19.0554	47.0867	0.00	0.28
OWENTOWN	13.5997	33.6055	0.00	0.20
BETIS	111.8020	276.2683	0.01	1.64

SUBBASIN #	111	Area [ha]	Area [acres]	%Wat.	Area %Sub.	Area %
		2500.4898	6178.8353	0.28		

Table11-119

LANDUSE:

Residential-High Density --> URHD	0.3953	0.9768	0.00	0.02
Range-Brush --> RNGB	61.5853	152.1804	0.01	2.46
Pasture --> PAST	37.9473	93.7697	0.00	1.52
Range-Grasses --> RNGE	66.2497	163.7062	0.01	2.65
Water --> WATR	1270.1277	3138.5491	0.14	50.80
Wetlands-Forested --> WETF	9.6449	23.8331	0.00	0.39
Wetlands-Mixed --> WETL	183.6491	453.8061	0.02	7.34
Forest-Deciduous --> FRSD	6.0083	14.8469	0.00	0.24
Forest-Evergreen --> FRSE	552.7656	1365.9116	0.06	22.11
Forest-Mixed --> FRST	47.9875	118.5796	0.01	1.92
Residential-Low Density --> URLD	255.1956	630.6010	0.03	10.21
Residential-Medium Density --> URMD	8.9334	22.0749	0.00	0.36

SOIL:

TAHOULA	56.0513	138.5056	0.01	2.24
DAMS	4.4272	10.9398	0.00	0.18
MARIETTA	577.1942	1426.2758	0.06	23.08
DOUCETTE	13.7559	33.9915	0.00	0.55
BERNALDO	110.4424	272.9088	0.01	4.42
TEHRAN	1.5021	3.7117	0.00	0.06
WATER	1290.4453	3188.7549	0.14	51.61
RAYBURN	107.6755	266.0714	0.01	4.31
CORRIGAN	46.0902	113.8911	0.01	1.84
LETNEY	64.3523	159.0177	0.01	2.57
BROWNDELL	49.6477	122.6820	0.01	1.99
STRINGTOWN	6.6408	16.4097	0.00	0.27
NIKFUL	30.9903	76.5786	0.00	1.24
KISATCHIE	141.2746	349.0967	0.02	5.65

Table11-120

Appendix Table 12. Predicted mean annual phosphorous and nitrogen loading at the farm level where conservation practices were implemented, Sam Rayburn Reservoir watershed, 1976 through 2005. The subbasins in this table are those that contained conservation practices implemented through the 319(h) or SB503 programs.

Subbasin	Phosphorous Loading (kg)		P reduction % I vs. II	Nitrogen Loading (kg)		N reduction % I vs. II
	Scenario I Current Conditions	Scenario II Treated Conditions		Scenario I Current Conditions	Scenario II Treated Conditions	
7	81	39	52%	38	24	38%
8	915	264	71%	339	123	64%
9	366	65	82%	127	26	79%
11	222	52	77%	95	33	65%
13	100	9	91%	41	7	82%
14	585	79	86%	216	45	79%
16	567	305	46%	204	116	43%
18	590	52	91%	223	27	88%
20	2,285	437	81%	861	212	75%
21	1,918	620	68%	694	267	62%
22	2,021	687	66%	730	285	61%
23	318	71	78%	105	28	73%
25	2,509	874	65%	997	417	58%
26	496	157	68%	179	67	63%
28	1,818	646	64%	671	286	57%
30	162	56	66%	54	25	54%
31	707	167	76%	259	80	69%
32	37	19	47%	10	7	30%
33	1,848	525	72%	776	268	65%
34	2,597	707	73%	1,049	369	65%
35	723	202	72%	299	108	64%
36	1,122	314	72%	447	157	65%
37	2,654	819	69%	1,016	377	63%
39	1,957	463	76%	774	235	70%
41	1,065	301	72%	434	158	63%
42	510	100	80%	179	41	77%
43	3,572	1,036	71%	1,289	442	66%

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Table 12-1

Appendix Table 12 – cont.

Subbasin	Phosphorous Loading (kg)			Nitrogen Loading (kg)			
	Scenario I Current Conditions	Scenario II Treated Conditions	P reduction % I vs. II	Scenario I Current Conditions	Scenario II Treated Conditions	N reduction % I vs. II	
44	17	9	48%	3	3	23%	
45	2,780	976	65%	1,009	420	58%	
46	2,471	669	73%	1,029	372	64%	
47	1,204	366	70%	502	251	50%	
48	3,066	886	71%	1,274	570	55%	
49	401	122	69%	198	95	52%	
50	2,115	639	70%	741	266	64%	
51	2,440	760	69%	882	319	64%	
52	1,644	378	77%	585	172	71%	
53	4,625	1,206	74%	1,575	487	69%	
54	39	20	48%	14	11	17%	
55	2,331	818	65%	855	364	57%	
56	2,058	604	71%	741	262	65%	
57	793	287	64%	297	135	55%	
58	1,173	515	56%	419	219	48%	
59	1,368	556	59%	507	246	51%	
60	59	29	51%	29	19	33%	
65	243	85	65%	108	51	52%	
67	995	348	65%	363	143	61%	
68	1,941	714	63%	722	320	56%	
69	1,241	404	67%	460	185	60%	
71	132	37	72%	46	14	69%	
72	650	227	65%	249	112	55%	
73	766	295	61%	240	108	55%	
75	1,417	424	70%	507	179	65%	
76	1,223	423	65%	408	177	57%	
77	1,818	598	67%	667	272	59%	
81	262	78	70%	93	36	62%	
82	545	279	49%	208	110	47%	

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Table 12-2

Appendix Table 12 – cont.

Subbasin	Phosphorous Loading (kg)		P reduction % I vs. II	Nitrogen Loading (kg)		N reduction % I vs. II
	Scenario I Current Conditions	Scenario II Treated Conditions		Scenario I Current Conditions	Scenario II Treated Conditions	
44	17	9	48%	3	3	23%
45	2,780	976	65%	1,009	420	58%
46	2,471	669	73%	1,029	372	64%
47	1,204	366	70%	502	251	50%
48	3,066	886	71%	1,274	570	55%
49	401	122	69%	198	95	52%
50	2,115	639	70%	741	266	64%
51	2,440	760	69%	882	319	64%
52	1,644	378	77%	585	172	71%
53	4,625	1,206	74%	1,575	487	69%
54	39	20	48%	14	11	17%
55	2,331	818	65%	855	364	57%
56	2,058	604	71%	741	262	65%
57	793	287	64%	297	135	55%
58	1,173	515	56%	419	219	48%
59	1,368	556	59%	507	246	51%
60	59	29	51%	29	19	33%
65	243	85	65%	108	51	52%
67	995	348	65%	363	143	61%
68	1,941	714	63%	722	320	56%
69	1,241	404	67%	460	185	60%
71	132	37	72%	46	14	69%
72	650	227	65%	249	112	55%
73	766	295	61%	240	108	55%
75	1,417	424	70%	507	179	65%
76	1,223	423	65%	408	177	57%
77	1,818	598	67%	667	272	59%
81	262	78	70%	93	36	62%
82	545	279	49%	208	110	47%

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Table 12-3

Appendix Table 12 – cont.

Subbasin	Phosphorous Loading (kg)		P reduction % I vs. II	Nitrogen Loading (kg)		N reduction % I vs. II
	Scenario I Current Conditions	Scenario II Treated Conditions		Scenario I Current Conditions	Scenario II Treated Conditions	
86	254	132	48%	97	53	46%
87	822	283	66%	257	101	61%
97	61	26	57%	33	20	38%
98	560	143	75%	200	62	69%
99	457	66	85%	174	38	78%
101	206	57	72%	88	36	59%
103	727	373	49%	282	158	44%
105	833	324	61%	312	146	53%
106	1,169	768	34%	426	323	24%
107	2,602	743	71%	988	338	66%
108	2,122	798	62%	757	334	56%
110	2,038	729	64%	790	316	60%

Table 12-4

Appendix Table 13. Predicted mean annual phosphorous and nitrogen loading at the subbasin level for each modeling scenario, Sam Rayburn Reservoir watershed, 1976 through 2005. See Figures 34 and 35 for charts of part of this data.

Subbasin	Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition.	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition.	Scenario II Treated Condition	N reduction % I vs. II
1	12,661		3.4	3.4	0.00%		3.4
2	18,352		8.0	8.0	0.00%		6.9
3	2,983		9.1	9.1	0.00%		6.5
4	6,760		7.9	7.9	0.00%		6.7
5	3,808		6.7	6.7	0.00%		6.0
6	18,260		5.4	5.4	0.00%		4.7
7	16,993		9.8	9.8	0.01%		6.6
8	16,098		10.2	9.2	9.70%		6.6
9	21,414		9.5	9.3	1.60%		5.6
10	12,402		8.9	8.9	0.00%		5.8
11	12,882		5.3	5.1	3.99%		5.2
12	7,204		8.6	8.6	0.00%		7.3
13	8,659		13.9	13.9	0.25%		7.3
14	3,220		12.1	10.7	11.76%		6.3
15	3,906		9.4	9.4	0.00%		5.6
16	5,010		14.0	13.7	2.12%		7.6
17	4,840		10.2	10.2	0.00%		6.0
18	8,682		10.8	10.0	7.42%		6.1
19	139		0.0	0.0	0.00%		0.1
20	6,147		17.8	12.8	28.15%		9.6
21	10,474		10.9	9.8	9.83%		5.9
22	6,022		11.4	10.1	11.36%		6.6
23	18,775		8.7	8.6	0.54%		5.4
24	4,284		7.1	7.1	0.00%		4.1
25	10,296		10.6	8.2	22.82%		7.9
26	10,719		4.6	4.5	2.26%		4.6
27	1,641		4.9	4.9	0.00%		4.3

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Appendix Table 13 – cont.

Subbasin	Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
28	14,993	5.6	5.0	10.78%	4.0	3.8	5.32%
29	290	0.4	0.4	0.00%	1.0	1.0	0.00%
30	6,689	5.3	5.3	0.19%	4.1	4.1	0.07%
31	9,624	6.2	6.0	4.28%	3.9	3.8	2.39%
32	5,615	5.7	5.6	0.18%	4.2	4.2	0.05%
33	7,170	10.4	9.3	10.75%	7.7	7.3	4.68%
34	14,592	10.2	9.2	9.33%	6.9	6.6	3.53%
35	2,584	13.5	13.1	2.51%	10.2	10.1	1.16%
36	5,119	7.0	6.1	12.69%	5.2	4.9	6.01%
37	18,049	9.1	7.9	13.05%	7.3	6.9	6.07%
38	444	9.6	9.6	0.00%	11.1	11.1	0.00%
39	5,597	6.5	6.1	6.45%	6.9	6.8	1.50%
40	94	22.4	22.4	0.00%	14.4	14.4	0.00%
41	5,588	11.2	10.4	6.98%	7.2	6.9	3.58%
42	7,967	7.0	6.8	2.46%	4.6	4.6	0.89%
43	10,732	16.3	14.2	12.76%	8.4	7.7	7.67%
44	6,620	9.2	9.2	0.09%	5.4	5.4	0.04%
45	2,409	20.8	17.6	15.52%	10.0	9.0	10.37%
46	5,948	7.3	5.9	18.88%	5.2	4.7	8.86%
47	13,345	2.4	2.0	18.78%	2.4	2.3	6.18%
48	12,565	9.6	8.7	8.98%	5.9	5.6	4.68%
49	2,094	4.5	3.5	21.17%	3.3	2.9	12.53%
50	11,845	16.9	16.3	3.71%	9.0	8.8	2.26%
51	8,758	25.4	24.1	5.15%	12.4	12.0	2.86%
52	3,314	14.1	12.9	8.27%	7.2	6.9	4.21%
53	30,476	8.6	7.8	8.87%	5.5	5.2	4.32%
54	5,098	9.6	9.6	0.18%	6.3	6.3	0.06%
55	5,530	21.9	19.7	10.16%	11.1	10.4	6.68%
56	4,540	11.8	10.3	12.57%	6.6	6.1	6.76%

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Appendix Table 13 – cont.

Subbasin	Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
57	15,547	7.9	7.7	1.96%	5.2	5.2	0.81%
58	5,678	11.4	10.1	11.23%	9.0	8.6	4.58%
59	10,032	8.8	7.6	13.19%	6.8	6.5	5.18%
60	5,151	6.4	6.3	0.86%	4.9	4.9	0.55%
61	49	4.5	4.5	0.00%	2.1	2.1	0.00%
62	1,628	8.4	8.4	0.00%	5.1	5.1	0.00%
63	5,028	9.4	9.4	0.00%	7.1	7.1	0.00%
64	3,574	0.7	0.7	0.00%	1.8	1.8	0.00%
65	8,395	7.1	7.1	0.59%	5.1	5.1	0.35%
66	875	0.5	0.5	0.00%	0.6	0.6	0.00%
67	12,864	10.5	10.4	0.75%	6.7	6.7	0.37%
68	8,432	16.0	14.4	9.53%	8.8	8.3	5.83%
69	10,730	8.1	7.9	3.07%	5.6	5.5	1.41%
70	460	0.2	0.2	0.00%	0.2	0.2	0.00%
71	8,746	5.0	5.0	0.04%	4.2	4.2	0.00%
72	5,724	11.2	8.5	23.94%	5.4	4.5	15.08%
73	5,196	11.8	11.3	4.27%	6.4	6.3	1.98%
74	12,685	4.5	4.5	0.00%	4.0	4.0	0.00%
75	5,648	14.4	13.6	5.25%	8.2	8.0	2.91%
76	14,978	8.1	7.6	7.01%	5.6	5.5	2.80%
77	5,522	13.1	8.8	32.67%	6.8	5.4	20.51%
78	6,440	6.5	6.5	0.00%	4.2	4.2	0.00%
79	5,262	5.7	5.7	0.00%	4.3	4.3	0.00%
80	470	0.8	0.8	0.00%	0.2	0.2	0.00%
81	8,019	3.9	3.4	14.69%	3.0	2.8	5.81%
82	8,204	3.9	3.7	5.01%	2.6	2.5	2.97%
83	650	0.1	0.1	0.00%	0.2	0.2	0.00%
84	6,345	0.7	0.7	0.00%	0.5	0.5	0.00%

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Appendix Table 13 – cont.

Subbasin	Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
85	8,327	0.7	0.7	0.00%	1.1	1.1	0.00%
86	14,318	1.0	0.7	28.20%	1.6	1.5	6.56%
87	7,305	5.8	5.5	5.85%	4.7	4.6	2.00%
88	870	0.1	0.1	0.00%	0.2	0.2	0.00%
89	8,263	4.0	4.0	0.00%	3.3	3.3	0.00%
90	9,299	0.5	0.5	0.00%	1.6	1.6	0.00%
91	6,863	2.3	2.3	0.00%	3.0	3.0	0.00%
92	9,047	5.7	5.7	0.00%	4.8	4.8	0.00%
93	1,721	1.2	1.2	0.00%	1.3	1.3	0.00%
94	9,857	0.9	0.9	0.00%	1.2	1.2	0.00%
95	19,530	0.7	0.7	0.00%	1.5	1.5	0.00%
96	30,945	0.4	0.4	0.00%	0.9	0.9	0.00%
97	3,189	9.5	9.4	0.85%	5.6	5.5	0.63%
98	5,238	17.1	16.5	3.75%	10.4	10.2	2.05%
99	19,309	9.5	8.9	5.51%	5.8	5.6	3.15%
100	1,324	4.8	4.8	0.00%	2.8	2.8	0.00%
101	908	14.2	14.1	0.68%	13.0	12.9	0.28%
102	5,707	9.8	9.8	0.00%	6.4	6.4	0.00%
103	7,567	7.0	6.8	3.17%	5.0	4.9	1.46%
104	6,747	7.4	7.4	0.00%	6.4	6.4	0.00%
105	17,812	5.4	5.1	5.36%	3.6	3.5	2.50%
106	8,068	19.1	18.8	1.36%	10.0	9.9	0.49%
107	8,363.	12.1	10.7	11.77%	7.1	6.6	6.29%
108	7,227	12.4	10.5	15.67%	8.4	7.7	8.03%
109	4,392	3.5	3.5	0.00%	3.0	3.0	0.00%
110	6,821	9.4	7.4	21.39%	8.1	7.4	9.08%
111	2,500	2.3	2.3	1.18%	1.4	1.4	0%

Table 13- 4

Appendix Table 14. Predicted mean annual sediment loading at the subbasin level for each modeling scenario, Sam Rayburn Reservoir watershed, 1976 through 2005. See Figure 36 for a chart of part of this data.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
1	12,661	1,852	0.15	1.20	1.20	0.00%
2	18,352	7,543	0.41	4.74	4.74	0.00%
3	2,983	938	0.31	3.02	3.02	0.00%
4	6,760	2,082	0.31	5.37	5.37	0.00%
5	3,808	1,402	0.37	4.64	4.64	0.00%
6	18,260	5,767	0.32	1.93	1.93	0.00%
7	16,993	5,692	0.33	2.79	2.79	0.00%
8	16,098	4,780	0.30	5.60	5.54	1.12%
9	21,414	7,444	0.35	3.63	3.63	0.25%
10	12,402	2,870	0.23	3.43	3.43	0.00%
11	12,882	3,781	0.29	5.49	5.48	0.18%
12	7,204	2,766	0.38	7.27	7.27	0.00%
13	8,659	4,618	0.53	4.84	4.84	0.02%
14	3,220	1,255	0.39	4.19	4.13	1.57%
15	3,906	1,237	0.32	4.14	4.14	0.00%
16	5,010	2,375	0.47	5.45	5.38	1.43%
17	4,840	1,601	0.33	4.98	4.98	0.00%
18	8,682	2,705	0.31	4.20	4.17	0.67%
19	139	0	0.00	0.02	0.02	0.00%
20	6,147	2,432	0.40	6.93	6.59	4.99%
21	10,474	3,107	0.30	4.90	4.74	3.31%
22	6,022	1,507	0.25	3.35	3.12	6.87%
23	18,775	5,086	0.27	3.75	3.75	0.21%
24	4,284	1,136	0.27	2.39	2.39	0.00%
25	10,296	3,416	0.33	4.46	4.17	6.37%
26	10,719	2,817	0.26	3.85	3.75	2.57%
27	1,641	246	0.15	3.63	3.63	0.00%

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Appendix Table 14 – cont.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
28	14,993	2,565	0.17	4.23	4.14	2.08%
	290	0	0.00	0.42	0.42	0.00%
	6,689	1,098	0.16	2.36	2.36	0.21%
	9,624	1,878	0.20	2.07	2.03	1.98%
32	5,615	732	0.13	3.52	3.49	0.82%
	7,170	2,135	0.30	3.30	3.07	6.74%
	14,592	4,135	0.28	2.99	2.67	10.67%
	2,584	792	0.31	6.95	6.82	1.87%
36	5,119	1,199	0.23	2.01	1.86	7.18%
	18,049	6,677	0.37	3.99	3.53	11.60%
	444	392	0.88	8.52	8.52	0.00%
	5,597	1,407	0.25	3.89	3.61	7.00%
40	94	78	0.83	7.21	7.21	0.00%
	5,588	1,879	0.34	6.07	5.89	3.00%
	7,967	1,570	0.20	4.73	4.64	1.78%
	10,732	3,061	0.29	7.16	6.70	6.40%
44	6,620	2,070	0.31	2.60	2.59	0.38%
	2,409	714	0.30	5.15	4.79	7.14%
	5,948	1,555	0.26	1.70	1.38	19.25%
	13,345	2,443	0.18	1.06	1.02	3.58%
48	12,565	3,152	0.25	4.23	3.73	11.86%
	2,094	281	0.13	0.91	0.65	28.88%
	11,845	5,801	0.49	7.63	7.35	3.72%
	8,758	5,286	0.60	10.26	9.75	5.01%
52	3,314	863	0.26	5.73	5.47	4.49%
	30,476	5,513	0.18	4.47	4.31	3.63%
	5,098	1,408	0.28	8.72	8.69	0.26%
	5,530	2,669	0.48	9.27	8.85	4.47%
	4,540	1,172	0.26	7.27	7.02	3.49%

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Appendix Table 14 – cont.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
57	15,547	3,051	0.20	2.13	2.07	2.72%
	5,678	1,875	0.33	15.93	15.55	2.38%
	10,032	2,603	0.26	12.07	11.78	2.44%
	5,151	837	0.16	3.14	3.13	0.51%
61	49	5	0.10	0.33	0.33	0.00%
	1,628	452	0.28	2.37	2.37	0.00%
	5,028	1,122	0.22	15.11	15.11	0.00%
	3,574	0	0.00	0.89	0.89	0.00%
65	8,395	2,006	0.24	3.43	3.40	0.76%
	875	0	0.00	0.27	0.27	0.00%
	12,864	2,795	0.22	7.78	7.74	0.53%
	8,432	3,052	0.36	7.09	6.89	2.93%
69	10,730	2,147	0.20	4.46	4.42	0.92%
	460	0	0.00	0.11	0.11	0.00%
	8,746	1,152	0.13	3.72	3.72	0.00%
	5,724	1,137	0.20	3.82	3.48	8.84%
73	5,196	1,135	0.22	13.16	13.02	1.07%
	12,685	1,555	0.12	3.90	3.90	0.00%
	5,648	1,881	0.33	10.91	10.72	1.71%
	14,978	2,580	0.17	10.22	10.13	0.93%
77	5,522	1,397	0.25	6.80	6.44	5.22%
	6,440	1,267	0.20	4.96	4.96	0.00%
	5,262	851	0.16	3.85	3.85	0.00%
	470	0	0.00	0.07	0.07	0.00%
81	8,019	768	0.10	2.14	2.11	1.36%
	8,204	896	0.11	1.68	1.64	1.91%
	650	0	0.00	0.10	0.10	0.00%
	6,345	0	0.00	0.28	0.28	0.00%

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Appendix Table 14 – cont.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
85	8,327	0	0.00	1.26	1.26	0.00%
86	14,318	80	0.01	0.55	0.52	5.85%
87	7,305	889	0.12	6.56	6.46	1.51%
88	871	0	0.00	0.07	0.07	0.00%
89	8,264	926	0.11	1.89	1.89	0.00%
90	9,300	0	0.00	0.56	0.56	0.00%
91	6,864	703	0.10	3.38	3.38	0.00%
92	9,047	1,294	0.14	5.16	5.16	0.00%
93	1,722	0	0.00	0.79	0.79	0.00%
94	9,857	0	0.00	0.30	0.30	0.00%
95	19,530	0	0.00	0.91	0.91	0.00%
96	30,945	0	0.00	0.51	0.51	0.00%
97	3,190	784	0.25	2.92	2.89	0.99%
98	5,239	1,627	0.31	5.93	5.87	1.10%
99	19,309	5,870	0.30	4.06	4.03	0.69%
100	1,324	226	0.17	1.11	1.11	0.00%
101	908	631	0.69	13.62	13.59	0.18%
102	5,708	0	0.00	0.39	0.39	0.00%
103	7,567	1,401	0.19	4.43	4.31	2.58%
104	6,748	3,042	0.45	4.70	4.70	0.00%
105	17,812	2,052	0.12	1.82	1.80	1.32%
106	8,069	4,179	0.52	6.91	6.66	3.59%
107	8,364	2,464	0.29	4.26	3.93	7.90%
108	7,228	1,890	0.26	10.20	9.44	7.40%
109	4,393	420	0.10	3.40	3.40	0.00%
110	6,821	2,253	0.33	9.86	9.10	7.74%
111	2,501	0	0.00	0.29	0.29	0.00%

Table 14- 4

Appendix Table 15. Predicted mean annual phosphorous and nitrogen loading at the watershed level for each modeling scenario, Sam Rayburn Reservoir watershed, 1976 through 2005. See Figure 37 for a chart of part of this data.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
1	12,661	41,320	41,320	0.00%	62,892	62,529	0.58%
2	18,352	145,870	145,870	0.00%	134,377	134,073	0.23%
3	2,983	46,830	46,830	0.00%	53,455	53,302	0.29%
4	6,760	51,560	51,560	0.00%	53,106	52,967	0.26%
5	3,808	121,850	121,850	0.00%	112,979	112,664	0.28%
6	18,260	148,090	148,090	0.00%	173,495	172,593	0.52%
7	16,993	163,090	163,090	0.00%	140,543	140,011	0.38%
8	16,098	161,080	146,510	9.05%	108,341	104,026	3.98%
9	21,414	201,830	198,730	1.54%	135,301	134,198	0.82%
10	12,402	109,690	109,690	0.00%	93,797	93,521	0.29%
11	12,882	330,540	328,050	0.75%	311,710	309,857	0.59%
12	7,204	61,140	61,140	0.00%	54,256	54,167	0.16%
13	8,659	119,290	119,020	0.23%	73,047	72,751	0.41%
14	3,220	359,100	340,570	5.16%	240,852	235,773	2.11%
15	3,906	511,200	492,500	3.66%	305,490	300,764	1.55%
16	5,010	70,640	69,110	2.17%	44,860	44,259	1.34%
17	4,840	481,350	478,900	0.51%	377,870	375,957	0.51%
18	8,682	91,750	85,230	7.11%	75,771	73,550	2.93%
19	139	570,200	561,180	1.58%	422,450	418,609	0.91%
20	6,147	105,890	77,070	27.22%	67,498	58,383	13.50%
21	10,474	111,640	104,820	6.11%	73,605	71,615	2.70%
22	6,022	66,110	60,980	7.76%	53,957	52,097	3.45%
23	18,775	468,000	464,300	0.79%	305,460	303,866	0.52%
24	4,284	607,600	587,500	3.31%	338,410	333,667	1.40%
25	10,296	98,920	87,940	11.10%	78,655	76,168	3.16%
26	10,719	45,790	44,980	1.77%	63,620	63,246	0.59%
27	1,641	183,490	171,630	6.46%	117,785	114,746	2.58%

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Appendix Table 15 – cont.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
28	14,993	81,730	73,810	9.69%	78,412	75,315	3.95%
29	290	812,700	790,500	2.73%	468,000	462,514	1.17%
30	6,689	344,010	323,910	5.84%	222,950	218,963	1.79%
31	9,624	895,800	847,800	5.36%	555,470	543,567	2.14%
32	5,615	1,184,400	1,142,000	3.58%	630,220	622,057	1.30%
33	7,170	70,820	66,780	5.70%	54,206	53,192	1.87%
34	14,592	138,120	128,010	7.32%	103,831	102,635	1.15%
35	2,584	235,220	220,960	6.06%	159,484	158,142	0.84%
36	5,119	34,670	31,030	10.50%	32,039	30,731	4.08%
37	18,049	290,700	268,340	7.69%	255,949	251,642	1.68%
38	443	271,780	254,040	6.53%	175,740	173,967	1.01%
39	5,596	93,640	81,000	13.50%	88,718	85,664	3.44%
40	94	579,100	537,300	7.22%	377,890	373,692	1.11%
41	5,588	60,640	57,060	5.90%	44,774	43,608	2.60%
42	7,966	54,220	53,150	1.97%	42,906	42,533	0.87%
43	10,732	169,690	151,780	10.55%	98,221	92,985	5.33%
44	6,620	60,220	60,180	0.07%	41,150	41,048	0.25%
45	2,408	2,176,800	2,081,700	4.37%	1,104,520	1,088,137	1.48%
46	5,947	41,100	35,100	14.60%	40,906	39,394	3.70%
47	13,345	30,500	26,350	13.61%	86,145	84,779	1.59%
48	12,565	683,400	634,800	7.11%	461,000	457,066	0.85%
49	2,094	77,660	66,080	14.91%	134,077	131,493	1.93%
50	11,845	200,520	194,850	2.83%	124,293	122,505	1.44%
51	8,758	224,400	216,090	3.70%	125,663	123,142	2.01%
52	3,313	88,710	82,090	7.46%	55,677	53,783	3.40%
53	30,476	2,450,700	2,340,500	4.50%	1,205,590	1,187,100	1.53%
54	5,097	47,660	47,600	0.13%	40,068	39,912	0.39%
55	5,529	973,600	899,000	7.66%	669,410	667,818	0.24%
56	4,540	2,581,200	2,460,100	4.69%	1,226,350	1,208,119	1.49%

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Appendix Table 15 – cont.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
57	15,547	118,450	116,950	1.27%	102,684	102,260	0.41%
58	5,678	63,350	59,750	5.68%	53,300	51,999	2.44%
59	10,032	85,320	79,580	6.73%	78,262	76,520	2.23%
60	5,151	292,060	289,020	1.04%	210,989	209,815	0.56%
61	49	2,740,600	2,619,600	4.42%	1,253,680	1,240,003	1.09%
62	1,628	2,700,600	2,579,700	4.48%	1,268,910	1,252,891	1.26%
63	5,028	46,340	46,340	0.00%	41,365	41,311	0.13%
64	3,574	3,031,500	2,907,100	4.10%	1,437,040	1,423,850	0.92%
65	8,395	57,700	57,490	0.36%	54,829	54,502	0.60%
66	875	2,966,300	2,846,500	4.04%	1,321,300	1,312,985	0.63%
67	12,864	131,620	130,940	0.52%	107,395	106,645	0.70%
68	8,432	552,300	527,500	4.49%	297,840	291,524	2.12%
69	10,730	84,240	82,830	1.67%	80,473	79,720	0.94%
70	460	634,500	608,400	4.11%	338,610	332,913	1.68%
71	8,746	3,124,300	3,003,700	3.86%	1,387,840	1,380,483	0.53%
72	5,724	272,070	252,310	7.26%	173,870	170,143	2.14%
73	5,196	63,060	61,920	1.81%	48,115	47,746	0.77%
74	12,685	3,795,900	3,649,500	3.86%	1,681,860	1,670,660	0.67%
75	5,648	78,150	74,960	4.08%	50,962	49,296	3.27%
76	14,978	1,124,000	1,046,500	6.90%	744,580	743,139	0.19%
77	5,522	68,090	53,700	21.13%	43,724	40,084	8.32%
78	6,440	3,896,100	3,747,700	3.81%	1,656,020	1,646,440	0.58%
79	5,262	29,500	29,500	0.00%	30,162	30,083	0.26%
80	470	1,187,200	1,095,800	7.70%	746,050	742,165	0.52%
81	8,019	37,390	35,240	5.75%	52,728	52,171	1.06%
82	8,204	3,945,800	3,795,500	3.81%	1,636,430	1,627,820	0.53%
83	650	1,219,600	1,126,400	7.64%	760,040	756,399	0.48%
84	6,345	5,157,800	4,914,000	4.73%	2,317,600	2,306,860	0.46%

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Appendix Table 15 – cont.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
85	8,327	8,127	8,127	0.00%	26,220	26,113	0.41%
86	14,318	345,980	322,580	6.76%	237,970	234,412	1.50%
87	7,305	41,810	39,840	4.71%	48,191	47,730	0.96%
88	871	5,153,700	4,910,700	4.72%	2,264,700	2,255,020	0.43%
89	8,264	35,410	35,410	0.00%	42,527	42,406	0.28%
90	9,300	12,768	12,768	0.00%	52,367	52,163	0.39%
91	6,864	15,210	15,210	0.00%	36,893	36,695	0.54%
92	9,047	52,620	52,620	0.00%	57,013	56,870	0.25%
93	1,722	32,010	32,010	0.00%	94,216	93,796	0.45%
94	9,857	411,480	386,580	6.05%	339,730	336,390	0.98%
95	19,530	95,560	95,560	0.00%	189,147	188,231	0.48%
96	30,945	5,172,300	4,930,100	4.68%	2,298,700	2,288,570	0.44%
97	3,190	263,820	260,840	1.13%	189,309	188,151	0.61%
98	5,239	237,100	234,390	1.14%	175,881	174,564	0.75%
99	19,309	844,200	797,400	5.54%	553,920	540,604	2.40%
100	1,324	1,158,000	1,115,600	3.66%	643,780	635,044	1.36%
101	908	578,500	536,800	7.21%	407,420	402,155	1.29%
102	5,708	53,353	53,353	0.00%	69,669	69,273	0.57%
103	7,567	313,550	293,170	6.50%	212,790	207,995	2.25%
104	6,748	437,300	434,790	0.57%	374,010	373,710	0.08%
105	17,812	2,140,200	2,049,000	4.26%	1,143,790	1,125,779	1.57%
106	8,069	151,080	150,720	0.14%	109,622	108,872	0.68%
107	8,364	855,500	757,300	11.48%	628,790	619,730	1.44%
108	7,228	210,380	195,220	7.21%	156,315	152,044	2.73%
109	4,393	236,190	213,560	9.58%	130,968	125,056	4.51%
110	6,821	61,690	50,430	18.25%	58,284	54,628	6.27%
111	2,501	5,660,300	5,284,500	6.64%	2,757,600	2,748,200	0.34%

Table 15- 4

Appendix Table 16. Predicted mean annual sediment loading at the watershed level for each modeling scenario, Sam Rayburn Reservoir watershed, 1976 through 2005. See Figure 37 for a chart of part of this data.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)		
		Scenario I Current Condition	Scenario II Treated Condition	Sediment. Reduction % I vs. II
1	12,661	15,150	15,150	0.00%
2	18,352	81,370	81,370	0.00%
3	2,983	31,660	31,660	0.00%
4	6,760	36,300	36,300	0.00%
5	3,808	108,800	108,800	0.00%
6	18,260	66,540	66,540	0.00%
7	16,993	46,400	46,400	0.00%
8	16,098	90,090	89,560	0.59%
9	21,414	65,880	65,770	0.17%
10	12,402	36,840	36,840	0.00%
11	12,882	156,700	156,700	0.00%
12	7,204	52,370	52,370	0.00%
13	8,659	41,880	41,870	0.02%
14	3,220	187,900	187,500	0.21%
15	3,906	317,600	317,200	0.13%
16	5,010	26,920	26,920	0.00%
17	4,840	266,200	266,200	0.00%
18	8,682	36,440	36,310	0.36%
19	139	318,600	318,400	0.06%
20	6,147	42,610	41,340	2.98%
21	10,474	51,280	49,860	2.77%
22	6,022	20,170	19,200	4.81%
23	18,775	259,500	259,300	0.08%
24	4,284	429,700	429,100	0.14%
25	10,296	41,760	40,430	3.18%
26	10,719	38,610	37,780	2.15%
27	1,641	88,910	87,060	2.08%

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Appendix Table 16 – cont.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)		
		Scenario I Current Condition	Scenario II Treated Condition	Sed. reduction % I vs. II
28	14,993	63,260	62,250	1.60%
29	290	684,600	683,900	0.10%
30	6,689	219,500	218,100	0.64%
31	9,624	369,900	369,100	0.22%
32	5,615	1,441,000	1,439,000	0.14%
33	7,170	23,640	22,450	5.03%
34	14,592	41,910	38,350	8.49%
35	2,584	104,400	101,200	3.07%
36	5,119	10,260	9,717	5.29%
37	18,049	160,600	156,300	2.68%
38	444	150,500	147,300	2.13%
39	5,597	68,390	67,930	0.67%
40	94	593,600	587,200	1.08%
41	5,588	33,900	33,130	2.27%
42	7,967	37,650	37,230	1.12%
43	10,732	74,270	71,200	4.13%
44	6,620	17,170	17,110	0.35%
45	2,409	1,649,000	1,647,000	0.12%
46	5,948	10,130	8,405	17.03%
47	13,345	14,130	13,730	2.83%
48	12,565	274,600	273,800	0.29%
49	2,094	87,980	85,990	2.26%
50	11,845	85,550	82,970	3.02%
51	8,758	89,770	86,210	3.97%
52	3,314	54,670	54,270	0.73%
53	30,476	939,200	937,900	0.14%
54	5,098	44,430	44,320	0.25%
55	5,530	701,800	699,500	0.33%
56	4,540	1,256,000	1,254,000	0.16%

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Appendix Table 16 – cont.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)			Sediment Reduction % I vs. II
		Scenario I Current Condition	Scenario II Treated Condition		
57	15,547	29,390	28,720		2.28%
58	5,678	90,470	89,050		1.57%
59	10,032	121,100	119,100		1.65%
60	5,151	196,000	194,600		0.71%
61	49	3,019,000	3,014,000		0.17%
62	1,628	2,050,000	2,047,000		0.15%
63	5,028	75,970	75,970		0.00%
64	3,574	2,780,000	2,776,000		0.14%
65	8,395	25,030	24,880		0.60%
66	875	1,594,000	1,592,000		0.13%
67	12,864	99,960	99,540		0.42%
68	8,432	237,300	232,800		1.90%
69	10,730	42,820	42,520		0.70%
70	460	345,300	340,800		1.30%
71	8,746	1,719,000	1,717,000		0.12%
72	5,724	267,700	263,500		1.57%
73	5,196	68,390	67,950		0.64%
74	12,685	2,256,000	2,250,000		0.27%
75	5,648	55,250	54,680		1.03%
76	14,978	604,100	603,100		0.17%
77	5,522	26,080	25,620		1.76%
78	6,440	3,445,000	3,437,000		0.23%
79	5,262	20,220	20,220		0.00%
80	470	722,800	721,600		0.17%
81	8,019	17,130	17,050		0.47%
82	8,204	3,453,000	3,447,000		0.17%
83	650	822,300	821,300		0.12%
84	6,345	4,570,000	4,565,000		0.11%

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Appendix Table 16 – cont.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)		
		Scenario I Current Condition	Scenario II Treated Condition	Sediment Reduction % I vs. II
85	8,327	8,140	8,140	0.00%
86	14,318	180,300	179,100	0.67%
87	7,305	45,280	45,020	0.57%
88	871	6,085,000	6,077,000	0.13%
89	8,264	15,070	15,070	0.00%
90	9,300	5,167	5,167	0.00%
91	6,864	23,200	23,200	0.00%
92	9,047	44,380	44,380	0.00%
93	1,722	42,280	42,280	0.00%
94	9,857	203,900	202,800	0.54%
95	19,530	132,000	132,000	0.00%
96	30,945	4,439,000	4,432,000	0.16%
97	3,190	155,000	153,400	1.03%
98	5,239	111,400	109,800	1.44%
99	19,309	306,700	305,800	0.29%
100	1,324	1,178,000	1,176,000	0.17%
101	908	412,600	406,000	1.60%
102	5,708	2,212	2,212	0.00%
103	7,567	138,200	136,700	1.09%
104	6,748	234,400	234,300	0.04%
105	17,812	1,012,000	1,011,000	0.10%
106	8,069	55,750	54,070	3.01%
107	8,364	647,400	641,400	0.93%
108	7,228	211,600	207,800	1.80%
109	4,393	160,400	156,200	2.62%
110	6,821	67,260	64,370	4.30%
111	2,501	7,745,000	7,729,000	0.21%

Table 16- 4

Table 17. Manure production and application by subbasin, scenario I and II, Sam Rayburn Reservoir watershed.

Subbasin	Area (ha)	Manure Prod. (tonnes)	Manure Application (tonnes)		Manure Application (tonnes)	
			Scenario I On Farm	Scenario I Off Farm	Scenario II On Farm	Scenario II Off Farm
7	16,993	0	0	0	0	0
8	16,098	0	1,767	(1,767)	952	(952)
9	21,414	0	249	(249)	62	(62)
11	12,882	0	480	(480)	0	0
13	8,659	0	27	(27)	0	0
14	3,220	0	693	(693)	319	(319)
16	5,010	0	377	(377)	269	(269)
18	8,682	0	599	(599)	0	0
20	6,147	0	2,528	(2,528)	268	(268)
21	10,474	2,613	2,532	81	1,469	1,144
22	6,022	1,920	1,463	457	749	1,170
23	18,775	552	364	188	178	374
25	10,296	6,603	5,720	883	3,746	2,857
26	10,719	962	106	856	46	916
28	14,993	1,520	1,172	348	617	903
30	6,689	276	5	271	2	274
31	9,624	293	337	(44)	121	172
32	5,615	428	0	428	0	428
33	7,170	5,657	2,652	3,006	1,425	4,232
34	14,592	13,042	3,938	9,105	1,945	11,097
35	2,584	1,603	196	1,407	95	1,508
36	5,119	2,478	766	1,712	395	2,083
37	18,049	10,053	5,241	4,812	3,126	6,927
39	5,597	1,706	901	805	286	1,420
41	5,588	1,715	877	837	445	1,270
42	7,967	747	479	268	50	697
43	10,732	5,888	3,410	2,478	1,804	4,084

(continued on next page)

Appendix Table 17 – cont.

Subbasin	Area (ha)	Manure Prod. (tonnes)	Manure Application (tonnes)		Manure Application (tonnes)	
			Scenario I On Farm	Scenario I Off Farm	Scenario II On Farm	Scenario II Off Farm
44	6,620	859	0.0	859.2	0.0	859.2
45	2,408	2,294	863.4	1,430.9	677.0	1,617.3
46	5,948	3,573	2,165.2	1,408.3	1,037.0	2,536.5
47	13,345	2,330	1,174.7	1,155.6	913.8	1,416.5
48	12,565	5,488	3,011.4	2,476.2	1,521.0	3,966.5
49	2,094	1,218	313.3	905.0	142.5	1,075.7
50	11,845	3,501	1,287.1	2,213.4	485.8	3,014.7
51	8,758	6,147	2,748.0	3,399.4	1,238.5	4,908.9
52	3,314	2,070	881.0	1,189.1	352.7	1,717.4
53	30,476	8,569	4,162.9	4,406.2	1,950.0	6,619.1
54	5,098	343	0.0	343.3	0.0	343.3
55	5,529	3,304	1,219.7	2,084.3	855.0	2,449.0
56	4,540	1,522	1,188.8	333.0	570.9	950.9
57	15,547	3,598	618.1	2,980.3	337.7	3,260.6
58	5,678	1,753	923.5	829.1	659.3	1,093.3
59	10,032	2,701	2,158.1	543.2	1,261.3	1,440.0
60	5,151	0	0.0	0.0	0.0	0.0
65	8,395	623	23.8	599.1	5.8	617.2
67	12,864	1,422	200.3	1,221.8	82.4	1,339.8
68	8,432	3,297	1,262.0	2,034.6	645.0	2,651.6
69	10,730	1,774	315.5	1,458.3	234.0	1,539.8
71	8,746	0	1.4	(1.4)	0.4	(0.4)
72	5,724	3,515	3,198.6	316.7	2,143.0	1,372.3
73	5,196	1,654	314.4	1,339.4	239.0	1,414.8
75	5,648	1,843	1,018.8	824.2	478.0	1,365.0
76	14,978	2,172	1,202.3	970.2	787.0	1,385.5
77	5,521	1,876	2,595.9	(719.7)	1,688.0	188.2
81	8,019	373	678.7	(305.8)	472.0	(99.2)
82	8,204	0	348.1	(348.1)	293.0	(293.0)

(continued on next page)

Appendix Table 17 – cont.

Subbasin	Area (ha)	Manure Prod. (tonnes)	Manure Application (tonnes)		Manure Application (tonnes)	
			Scenario I On Farm	Scenario I Off Farm	Scenario II On Farm	Scenario II Off Farm
86	14,318	0	805	(805)	502	(502)
87	7,305	693	299	395	163	530
97	3,189	0	0	0	0	0
98	5,239	812	356	456	173	639
99	19,309	0	848	(848)	0	0
101	908	425	16	409	8	417
103	7,567	552	501	50	221	331
105	17,812	3,414	772	2,642	523	2,891
106	8,069	2,287	1,646	641	627	1,660
107	8,364	3,082	2,742	341	1,106	1,976
108	7,228	3,397	2,466	931	1,357	2,041
110	6,821	1,917	2,049	(132)	972	945

*Only the subbasins with concentrated animal feeding operations (CAFO), or utilizing manure from a CAFO are listed in this table.

**In some subbasins, more manure is applied than produced, as indicated by the negative values in parentheses. This indicates a transfer of manure into the subbasin.

**Modeling Nutrient Loads from Poultry Operations in
the Toledo Bend Reservoir and Sam Rayburn
Reservoir Watersheds**

Toledo Bend Reservoir Watershed

**Prepared in Cooperation with the
Texas State Soil and Water Conservation Board**

March 1, 2008

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EXECUTIVE SUMMARY

The purpose of this study was to simulate nutrient and sediment loadings in the Toledo Bend Reservoir Watershed using the Soil and Water Assessment Tool (SWAT) hydrologic/water quality model. Two scenarios were modeled: (I.) current conditions scenario representing the conditions in the watershed prior to the implementation of the WQMPs; (II.) treated conditions scenario representing the conditions after the implementation of 335 WQMPs on 18,294 ha (45,205 ac). Part one of this report discusses model calibration and validation. Part two discusses the evaluation of the conservation practices with the model.

SWAT was calibrated/validated to measured stream flow at seven USGS stream gages, and calibrated to measured sediment (TWDB hydrographic survey) in Lake Murvaul. Stream water quality monitoring data was not available for this basin. For SWAT model calibration purposes the nutrient calibration settings developed for a neighboring watershed, Sam Rayburn Reservoir, were used.

The validated model was applied to evaluate the effects of various best management practices on three levels: farm level; subbasin level; and watershed level. The analysis was performed for the time period 1976 through 2005. The major BMPs simulated were: waste utilization, nutrient and pest management, ponds, buffer practices (field borders, filter strips, riparian forest buffers), pasture and hayland planting, prescribed grazing, forage harvest management, heavy use area protection, waste storage facility, brush management, critical area planting, fencing, tree establishment, and upland wildlife habitat management.

Scenario II showed that BMPs at the farm level where they were implemented reduced phosphorous loadings from 64 to 94 percent. Nitrogen loadings were reduced from 30 to 79 percent and sediment loadings from 65 to 74 percent.

Scenario II showed that BMPs at the subbasin level reduced phosphorous loadings from 3 to 75 percent. Nitrogen loadings were reduced 1 to 39 percent while sediment was reduced from 1 to 20 percent.

Scenario II showed that BMPs at the watershed level at the outlet of the Toledo Bend Reservoir watershed (subbasin 105), reduced phosphorous, nitrogen, and sediment loadings by 14.0, 2.9, and 0.1 percent, respectively.

All simulations assume that the effectiveness of BMPs remains constant for the entire modeling period, and do not account for loss of capacity in BMPs due to sediment accumulation.

Given these results, the SB 503 and the §319(h) projects have been effective in reducing nonpoint source pollution at all levels, but the greatest benefit is at the farm level. Considering that less than 2 percent of the modeled watershed was given conservation treatment through these programs, there exist good potential for further nutrient and sediment reductions through continued WQMP planning and application.

MODELING NUTRIENT LOADS FROM POULTRY OPERATIONS IN THE TOLEDO BEND RESERVOIR AND SAM RAYBURN RESERVOIR WATERSHEDS

Toledo Bend Reservoir Watershed Hydrologic Simulation

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Watershed Data

Physical Data

The Toledo Bend Reservoir Watershed is located in Texas and western Louisiana (Figure 1). The reservoir is on the Sabine River, which forms a portion of the boundary between the two states. Toledo Bend Reservoir is the largest man-made body of water in the south and the fifth largest in surface area in the United States. From the dam site near Burkeville, Texas, the reservoir extends up the Sabine River for about 104 km (65 mi) to Logansport, Louisiana, and inundates land in Sabine, Shelby, Panola, and Newton Counties, Texas, and Sabine and DeSoto Parishes, Louisiana.

The reservoir controls runoff from 1,859,093 hectares (7,178 square miles). Deliberate impoundment began on October 3, 1966. A search of USGS records indicates storage extremes: maximum contents, 597,015 hectare-meters (4,840,000 ac-ft), May 18, 1989, minimum observed, 350,191 hectare-meters (2,839,000 ac-ft), September 22, 2006.

The climate is subtropical humid, characterized by hot, humid summers and chilly to mild winters. Annual precipitation averages about 1,058 mm (42 inches) in Hunt county near the top of the basin, to 1,434 mm (56 inches) at the reservoir. Winter rainfall is associated with large storms that the westerlies steer from west to east. Most summer rainfall occurs during thunderstorms and an occasional tropical storm or hurricane.

The watershed is within Major Land Resource Area (MLRA) 133B – The Western Coastal Plain. The MRLA is further subdivided into Common Resource Areas (CRAs) (Figure 2). Three CRAs are found in the watershed. The Tertiary Uplands (35A), gently to moderately sloping, cover the upper two thirds of the watershed. Tertiary deposits are mostly Eocene sediments typically with sandy or loamy surface textures. Natural vegetation is mostly oak-pine, with many areas replanted to loblolly pine for timber production, or in improved pasture. The Southern Tertiary Uplands (35E), located in the lower part of the watershed, cover the remainder of longleaf pine range on Tertiary sediments. Like 35A, this region is hilly and well drained, but differs in having more pine forest than the oak-pine and pasture land cover found to the north. A smaller area of CRA 35B, Floodplains and Low Terraces, is

found along the Sabine river bottom above Toledo Bend Reservoir. This is a southern bottomland hardwood community on Holocene alluvial floodplains.

Water quality is an important concern in the United States. The Toledo Bend Basin water quality parameters of concern are listed in the draft 2008 Texas Commission on Environmental Quality (TCEQ) Water Quality Inventory and 303(d) List. Concerns are mercury in fish tissue, and depressed dissolved oxygen levels.

Partners in this project include the Texas State Soil and Water Conservation Board, Harrison County SWCD, Pineywoods SWCD, Rusk SWCD, Panola SWCD, Shelby SWCD, USDA-NRCS, and USDA-NRCS Water Resources Assessment Team, and Grassland/Blackland Research Center, Temple, TX.

Water Quality Management Plan Overview

Water Quality Management Plans (WQMPs) are site-specific conservation plans developed through and approved by the local soil and water conservation districts. They are designed to assist landowners in protecting the environment while remaining in compliance with water quality laws. The plan covers the entire operating unit and includes the conservation practices appropriate for the farm's resources while meeting the farmer's goals.

Conservation practices are often referred to as best management practices (BMPs). The terms are synonymous for the purposes of this report.

The Texas Senate Bill 503, passed in 1993, directed the TSSWCB to implement water quality management plans in Texas. The planning process began with the first certified WQMPs completed in 1994. Then, with the passage of the 2001 SB 1339, all poultry operations were required to obtain a Texas State Soil and Water Conservation Board (TSSWCB)-certified WQMP. Funding through the Environmental Protection Agency (EPA) Clean Water Act §319(h) program was made available to the Soil and Water Conservation Districts (SWCDs) to hire additional planning technicians to meet the requests for planning assistance.

Data provided from the local SWCD offices in the Toledo Bend watershed indicates that 335 WQMPs were completed and certified. Table 1 provides an overview of these WQMPs by SWCD. Plan locations, livestock production capacity, manure and nutrient production are summarized by SWCD in the table. Most of these plans were for poultry farms; however, a few dairies, small feedlots, and one fish farm operation were also included.

It is important to remember that the conservation planning process is dynamic. Annual updates are needed to the waste utilization and nutrient management plan components as livestock numbers change, manure applications are rotated, manure is shipped off-site, and changes are made to the cropping systems. The WQMP data gathered for this project is the result of 13 years of conservation planning, practice application, and plan revision.

This project included only the SB503 and §319(h)-funded WQMPs. Conservation plans and practices developed under other programs, such as the Environmental Quality Incentive Program (EQIP) were not included.

Project Objectives

The main objectives of this study were to:

- Collect GIS, landuse, management, and measured data for the Toledo Bend Reservoir watershed.
- Calibrate the watershed model to measured flow, sediment, and nutrients.
- Simulate nutrient loads for two scenarios: (I) Baseline - existing condition, (II) SB503 and §319(h) BMP applications.

This report was organized into two parts. Part 1 describes the calibration of the SWAT model for flow, sediment, and nutrients. Part 2 describes the application of the model to evaluate the impact of best management practices (BMPs) on water quality at various locations in the watershed.

PART 1 CALIBRATION

INTRODUCTION

The purpose of this part of the report is to describe the calibration of the SWAT model for flow, sediment, and nutrient loading. The SWAT model contains many input parameters that describe the physical, chemical, and biological processes. During the calibration phase, simulations are made and the results are compared to observed data. The values of the input parameters are refined within the range of acceptability until the model reproduces the observed data.

METHODOLOGY

Model Inputs

Land Use / Cover

The land use/land cover map was derived from the USGS National Land Cover Dataset (NLCD). The land use map for the watershed is shown in Figure 3. The area and percentages of each land use is indicated in Table 2.

Soils

The Soil Survey Geographic (SSURGO) databases were available for Rusk, Harrison, Panola, Shelby, Jasper, and Newton counties, and DeSoto Parish. SSURGO is the most detailed level of soil mapping done by the NRCS. The less detailed State Soil Geographic (STATSGO) soil data was used for San Augustine and Sabine counties, and Caddo and Sabine Parishes. These soil databases were downloaded and merged together to create the soils database for the Toledo Bend watershed (Figure 4).

The dominant soil series in the Toledo Bend watershed were Sacul (19.2%), Eastwood (8.3%), Mollville (5.8%), Darco (4.7%), Metcalf (4.3%), Bowie (4.2%), Cart (4.0%), Cuthbert (3.9%), Kirvin (3.6%), Maben (3.4%), Attoyac (2.8%), Kullit (2.7%), Tonkawa

(2.5%), Laneville (2.4%), Scottsville (2.4%), Keithville (2.3%), Bernaldo (2.3%), Estes (2.2%), and Mantachie (1.7%). These nineteen soils, with water (2.1%) represent 84.3 percent of the watershed area. A short description of each follows:

Sacul. - The Sacul series consists of very deep, moderately well drained, slowly permeable soils that formed in acid, loamy and clayey marine sediments. These soils are on uplands of the Western and Southern Coastal Plains; MLRAs 133A and 133B. Near the type location, the average annual air temperature is about 63 degrees F and the average annual precipitation is about 50 inches. Slopes are dominantly 2 to 25 percent but range from 1 to 40 percent.

Eastwood. - The Eastwood series consists of deep, well drained, very slowly permeable soils. They formed in weakly consolidated marine deposits of silty clay loam texture. These soils are on gently sloping to moderately steep uplands. Slopes range from 1 to 20 percent.

Mollville. - The Mollville series consists of very deep, poorly drained, slowly permeable soils that formed in thick, stratified sandy and loamy sediments. These soils are in nearly level or depressional positions on stream terraces. Slopes are 0 to 1 percent.

Darco. - The Darco series consists of very deep, somewhat excessively drained, moderately permeable soils that formed in sandy and loamy deposits on uplands. It is gently sloping to steep and slopes range from 1 to 25 percent.

Metcalf. - The Metcalf series consists of deep, somewhat poorly drained, very slowly permeable soils that formed in Pleistocene age loamy marine or alluvial sediments over Tertiary age clayey deposits. These soils are on broad level, nearly level marine or stream terraces on the Coastal Plain. Slope ranges from 0 to 2 percent.

Bowie. - The Bowie series consists of very deep, well drained, moderately slowly permeable soils that formed in loamy Coastal Plain deposits. These soils are on broad very gently sloping to moderately sloping uplands. Slopes range from 1 to 8 percent.

Cart. - The Cart series consists of very deep, well drained, slowly permeable soils on stream terraces and terrace remnants at 10 to 100 feet above present streams. The soil formed in loamy alluvial sediments and is deep to a fragipan. Slopes range from 0 to 5 percent.

Cuthbert. - The Cuthbert series consists of soils that are moderately deep to weakly consolidated sandstone and shale. They are well drained and slowly to moderately slowly permeable. These soils are on strongly sloping to steep uplands. Slopes are dominantly 8 to 25 percent but range from 5 to 40 percent.

Kirvin. - The Kirvin series consists of soils that are deep to stratified sandstone and shale. They are well drained and moderately slowly permeable. These soils are on gently sloping to moderately steep convex uplands. Slope is dominantly 2 to 8 percent but ranges from 1 to 15 percent.

Maben. - The Maben series consists of well-drained soils that formed in thinly stratified sandy to clayey sediments and soft shale or laminar clays. Permeability is moderately slow.

These gently sloping to very steep soils are on uplands of the Southern and Western Coastal Plain Major Land Resource Areas. Slopes range from 2 to 60 percent.

Attoyac. - The Attoyac series consists of very deep, well drained, moderately permeable soils that formed in loamy alluvial sediments. These soils are on nearly level to strongly sloping Pleistocene terraces. Slopes are dominantly less than 3 percent but range from 0 to 15 percent.

Kullit. - The Kullit series consists of deep, moderately well drained, moderately slowly permeable soils that formed in loamy and clayey sediments of Cretaceous or Quaternary age. These soils are on nearly level to gently sloping ridge crest of uplands in the Western Coastal Plains. Slopes range from 0 to 5 percent. Mean annual precipitation is 45 inches. Mean annual temperature is 63 degrees F.

Tonkawa. - The Tonkawa series consists of very deep, excessively drained soils. These nearly level to steep soils formed in sandy beds derived from marine deposits on the Carrizo, Queen City, and Sparta Formations. Slope ranges from 0 to 35 percent. Mean annual air temperature is 18 degrees C (65 degrees F); mean annual precipitation is about 1168 mm (46 in).

Laneville. - The Laneville series consist of very deep, moderately well drained, slowly permeable, loamy soils on flood plains. These soils formed in loamy and clayey alluvium. Slopes range from 0 to 1 percent.

Scottsville. - The Scottsville series consists of very deep, moderately well drained, very slowly permeable soils that formed in thin loamy sediments over clayey deposits. These soils are on broad nearly level to very gently sloping uplands. Slopes range from 0 to 3 percent.

Keithville. - The Keithville series consists of deep, moderately well drained, very slowly permeable soils that formed in loamy over clayey sediment of Tertiary Age. These soils are on broad nearly level or gently sloping uplands of the coastal plains. Slopes range from 1 to 5 percent. Keithville soils are saturated above the clayey layers to a depth of 2 to 3 feet below the surface for intermittent periods totaling 2 to 6 weeks during winter and early spring.

Bernaldo. - The Bernaldo series consists of very deep, well drained, moderately permeable soils that formed in loamy alluvial deposits. The soils are on nearly level to moderately sloping stream terraces. Slopes are dominantly less than 5 percent but range from 0 to 8 percent.

Estes. - The Estes series consists of very deep, somewhat poorly drained soils. These nearly level floodplain soils formed in acid clayey and loamy alluvium in the Coastal Plains. Slope ranges from 0 to 1 percent. Mean annual air temperature is about 18 degrees C (65 degrees F); mean annual precipitation is about 1168 mm (46 in).

Mantachie. - The Mantachie series consists of somewhat poorly drained, moderately permeable soils. They formed in loamy alluvium. These soils are on flood plains. They

usually flood late in winter and early in spring. The seasonally high water table is at a depth of 1.0 to 1.5 feet. Slope is dominantly less than 1 percent but ranges to 3 percent.

Topography

Elevations of the modeled portion of the Toledo Bend basin range from about 52 meters (171 ft) on the flood plain above Toledo Bend Reservoir to about 192 meters (630 ft) above mean sea level at the top of the watershed in Rusk County (Figure 5).

Subbasins in the Toledo Bend watershed (Figure 1) were delineated using the 30-meter (98.43 ft), 1:24,000 scale DEM. The result was 107 subbasins with an average size of 87.43 square kilometers (33.76 square miles).

Climate

Daily precipitation totals and maximum and minimum temperatures were obtained for National Weather Service stations within and adjacent to the watershed (Figure 6) for input to SWAT. The model uses rainfall and temperature data from the climate station nearest to the centroid of each subbasin. Climate stations outside the watershed, yet close enough to influence input data to the model, were included in the GIS database. Missing precipitation data was patched from neighboring climate stations, while missing temperature data was generated with the SWAT model. Table 3 lists precipitation stations located in or near the Toledo Bend watershed and the period of record for which data was available for each station.

Land Management

The cooperating SWCD offices and the USDA – Natural Resources Conservation Service (NRCS) offices provided detailed production and management information for each of the 335 WQMPs in the watershed. Detailed data included farm livestock production, manure and nutrient production, waste utilization, nutrient management and other conservation practices, soil test phosphorous and forages grown.

Cropland is insignificant in this watershed, comprising only about 0.10 percent of the land area. More important is the 16 percent of land use in improved pastures and hayfields, which receive the manure applications for forage production. Typical pasture forages are warm-season perennial grasses, including common Bermuda grass, Pensacola and Argentine Bahia grass, and hybrid Bermuda grasses. The most prevalent hybrid Bermudas are Coastal, Alicia, Tifton 44, and Tifton 85. Pastures are often a mixture of common Bermuda and Bahia grass. Hay fields more often will utilize a hybrid Bermuda. Observed soil test data was used to estimate soil phosphorous content for the pasture and hayland portions of the watershed.

Spatial View of WQMP locations, poultry production, and manure production

Figures 7 through 16 provide spatial views of the plan locations down to the subbasin level. Point locations of individual farms were not included in the interest of privacy protection.

- Figure 7 – Plan locations by subbasin (all 335 plans). No Louisiana WQMPs were included in this project.
- Figure 8 – Broiler plan locations by subbasin.
- Figure 9 – Breeder plan locations by subbasin.
- Figure 10 – Pullet plan locations by subbasin.
- Figure 11 – Dairy plan locations by subbasin.
- Figure 12 – Locations of plans receiving and applying manure from other farms. These farms generally have no confined animal feeding operations (CAFO). They buy or trade for manure from neighboring operations and apply it to their farms following a WQMP.
- Figure 13 – Fish farm plan locations by subbasin.
- Figure 14 – Poultry production map areally weighted.
- Figure 15 – Poultry manure production areally weighted. Total poultry manure produced in the subbasin was divided by the subbasin area.
- Figure 16 – Surface map of predicted soil test phosphorous (STP) based upon the soil tests in the 335 WQMPs. This map refers only to the pastureland and hayland land uses.

Model Calibration

Input variables were adjusted as needed to calibrate first for flow, then sediment, and finally nutrient concentrations. Significant input variables for the SWAT model are shown in Table 4. Available stream gages for flow calibration are shown in Table 5.

Subbasins were delineated using the 30-meter (98.43 ft) DEM and the ArcView interface for SWAT 2005. The subbasin threshold area was set to 5,000 hectares (12,355 ac). Site locations for reservoirs and stream gage locations were used to define additional subbasin outlets, resulting in 107 subbasins.

Required inputs for each subbasin (e.g. soils, land use/land cover, topography and climate) were extracted and formatted using the AVSWAT-X for SWAT 2005 interface. The input interface divided each subbasin into virtual subbasins or hydrologic response units (HRU). A single land use and soil were selected for each HRU. The number of HRU's within a subbasin was determined by: (1) creating an HRU for each land use that equaled or exceeded 7 percent of the area of a subbasin; and (2) creating an HRU for each soil type that equaled or exceeded 8 percent of any of the land uses selected in (1). The total number of HRU's (2,523) was dependent on the number of subbasins and the variability of the land use and soils within each subbasin. The properties for each of the selected land uses and soils were automatically extracted from model-supported databases.

Flow Calibration

Seven stream gages were available (Figure 17) for model stream flow calibration/validation. Table 5 lists the stream gages used for flow calibration/validation and the time period for each. Stream flow was first calibrated/validated for the gage furthest upstream. Then, sequentially moving downstream to the next gage and calibrating for that area. A base flow filter (Arnold et al., 1995) was used to determine the portioning of groundwater and surface flow.

Stream Gage 8022070 – This gage is on Martin Creek near Tatum, TX at the outlet of subbasin 99. The calibration period was from 1/1/1975 through 12/31/1985 (Figure 18), while the validation period was from 1/1/1986 through 12/31/1995 (Figure 19).

Stream Gage 8022300 – This gage is on the Murvaul Bayou near Gary, Texas, at the outlet of subbasin 100. The calibration period was from 1/1/1959 through 12/31/1970 (Figure 20), while the validation period was from 1/1/1971 through 12/31/1982 (Figure 21).

Stream Gage 8023200 – This gage is on the Tenaha Creek near Shelbyville, TX at the outlet of subbasin 103. The calibration period was from 1/1/1953 through 12/31/1966 (Figure 22), while the validation period was from 1/1/1967 through 12/31/1980 (Figure 23).

Stream Gage 8024500 – This gage is on Palo Gaucho Bayou near Hemphill, TX at the outlet of subbasin 83. The calibration period was from 1/1/1953 through 12/31/1958 (Figure 24), while the validation period was from 1/1/1959 through 12/31/1964 (Figure 25).

Stream Gage 8022400 – This gage is on Socagee Creek near Carthage, TX at the outlet of subbasin 101. The calibration period was from 1/1/1963 through 12/31/1967 (Figure 30), while the validation period was from 1/1/1968 through 12/31/1972 (Figure 31).

Stream Gage 8024400 – This gage is on the Sabine River near Milam, TX at the outlet of subbasin 104. The calibration period was from 1/1/1950 through 12/31/1957 (Figure 26), while the validation period was from 1/1/1958 through 12/31/1965 (Figure 27).

Stream Gage 8022500 – This gage is located on the Sabine River near Logansport, LA at the outlet of subbasin 102. The calibration period was from 5/1/1950 through 12/31/1957 (Figure 28), while the validation period was from 1/1/1958 through 12/31/1965 (Figure 29).

Adjustments were made to soil evaporation compensation factor, shallow aquifer storage, shallow aquifer re-evaporation, Manning's "n" values for channel roughness and channel transmission loss until the simulated total flow and fraction of base flow were approximately equal to the measured total flow and base flow, respectively.

To measure the accuracy of the SWAT predictions to observed values, the Nash-Sutcliffe coefficient of efficiency (E_{NS}) and root mean square error (RMSE) were used. Significant input variables for the SWAT model are shown in Table 4.

Sediment Calibration

The Texas Water Development Board (TWDB) Hydrographic Survey Unit completed a hydrographic survey of Lake Murvaul in November 1998. The purpose of the survey was to

determine the capacity of the lake at the normal pool elevation and to establish baseline information for future surveys. Results from this 1998 survey were compared to the initial estimated reservoir volume when the structure was completed in 1957.

Unlike older survey technology that made use of cables for positioning, Global Positioning System (GPS) technology was used to locate the horizontal position, and depth sounders to collect vertical measurements. Data collection is by an on-board computer, which later was used to calculate the lake volume.

According to the TWDB 1998 Volumetric Survey Report of Lake Murvaul, the storage capacity was reduced by 928.9 Ha-m (7,531 ac-ft) between 1957 (beginning of impoundment) and 1998. Assuming the reduction in storage is due to sediment and that the unit weight of submerged sediment is 55 lb/ft³ (881 kg/m³), the amount of sediment deposited in the lake during this period was 8,184,062 tonnes (9,021,385 tons).

The period 1957 through November 1998 was used to calibrate SWAT for sediment loadings to Lake Murvaul. For these conditions, it was assumed that the USLE conservation practice factor ("P") was 1.0 on all cropland. In order to adjust sediment prediction, several factors were adjusted:

Channel Erodibility Factor – Range is 0.0 to 1.0. A value of 0.0 indicates a non-erosive channel. A value of 1.0 indicates no resistance to erosion.

Channel Cover Factor – Range is 0.0 to 1.0. A value of 0.0 indicates that the channel is completely protected from degradation by cover, and a value of 1.0 indicates there is no vegetative cover on the channel.

Residue Decomposition Coefficient – Range is 0.01 to 0.09. The fraction of residue which will decompose in a day, assuming optimal moisture, temperature, C:N ratio and C:P ratio.

Sediment Concentration Factor (SPCON) – Range is 0.0001 to 0.01. Linear parameter for calculating the maximum amount of sediment that can be re-entrained during channel sediment routing.

Sediment Exponent Parameter (SPEXP) – Range is 1.0 to 1.5. Exponential factor for calculating sediment re-entrained in channel sediment routing.

Peak Rate Function (PRF) – Range is 0.5 to 2.0. This is the peak rate adjustment for sediment routing in the channel. Sediment routing is a function of peak flow rate and mean daily flow. Because SWAT cannot directly calculate the sub-daily hydrograph, this variable was incorporated to allow adjustment for the effect of the peak flow rate on sediment routing. This variable influences channel degradation.

Nutrient Calibration

No in-stream monitoring data was available for the Toledo Bend watershed. However, limited grab sample data was available from 1998 through 2005 (usually four samples per year, with a few years missing) for nine monitoring stations in the neighboring Sam Rayburn Reservoir Watershed. The nutrient calibration settings developed for the Sam Rayburn Watershed were applied to the Toledo Bend study. Appropriate model variables were

adjusted so that the mean of the predicted values was within two standard deviations of the mean of the measured values as specified in the QAPP. Tables 6 and 7 provide the model calibration settings for nitrogen and phosphorous, respectively.

Evaluation of Model Performance

Model prediction performance was evaluated by the mean, root mean square error (RMSE), and Nash-Sutcliffe simulation efficiency (E_{NS}). The E_{NS} indicates how well the plot of observed versus simulated values fits the 1:1 line. If the E_{NS} value is less than or close to zero, the model prediction is considered unacceptable or poor. If the E_{NS} value is one, then the model is perfect. Generally, an E_{NS} of 0.6 or higher is considered good.

RMSE is the calculated difference between measured and predicted values expressed as a residual of the means squared. One way to gage the accuracy of the calibration is to compare the mean measured monthly flow volume with the RMSE. The lower the RMSE compared to the measured values the more precise the comparison.

Results and Discussion

Flow Calibration/Validation:

Stream Gage 8022070 Calibration – Flow calibration results are shown in Figure 19. The RMSE (2.04) and E_{NS} (0.69) values indicate that predicted total monthly flow compares reasonably well with total monthly measured flow. The base flow filter (Arnold et al., 1995) estimated from stream flow records that the groundwater contribution to stream flow was 40 percent. The SWAT predicted base flow was 38 percent.

Stream Gage 8022070 Validation – Flow validation results are shown in Figure 19. Again, the RMSE (3.29) and E_{NS} (0.79) values indicate that predicted total flow compares reasonably well with the measured flow. Estimated base flow was 40 percent. The SWAT predicted base flow was 38 percent.

Stream Gage 8022300 Calibration – Flow calibration results are shown in Figure 20. The RMSE (1.84) and E_{NS} (0.75) values indicate that predicted total flow compares quite well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8022300 Validation – Flow validation results are shown in Figure 21. The RMSE (2.02) and E_{NS} (0.68) values indicate that predicted total flow compares reasonably well with the measured flow. Estimated base flow was 40 percent. The SWAT predicted base flow was 37 percent.

Stream Gage 8023200 Calibration – Flow calibration results are shown in Figure 22. The low RMSE (1.71) and high E_{NS} (0.82) values indicate that predicted total flow again compares well with measured flow. The estimated base flow was 39 percent. The SWAT predicted base flow was 38 percent.

Stream Gage 8023200 Validation – Flow validation results are shown in Figure 23. Again, low RMSE (1.49) and an E_{NS} (0.82) values indicate that predicted total flow compares well

with the measured flow. Estimated base flow was again 39 percent. The SWAT predicted base flow was 37 percent.

Stream Gage 8024500 Calibration – Flow calibration results are shown in Figure 24. The low RMSE (3.48) and an E_{NS} (0.60) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8024500 Validation – Flow validation results are shown in Figure 25. The low RMSE (2.15) and an E_{NS} (0.61) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8024400 Calibration – Flow calibration results are shown in Figure 26. The low RMSE (57.48) and an E_{NS} (0.90) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8024400 Validation – Flow validation results are shown in Figure 27. The low RMSE (41.11) and an E_{NS} (0.90) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8022500 Calibration – Flow calibration results are shown in Figure 28. The low RMSE (16.85) and an E_{NS} (0.96) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8022500 Validation – Flow validation results are shown in Figure 29. The low RMSE (26.51) and an E_{NS} (0.96) value indicates that predicted total flow compares very well with measured flow. The estimated and predicted base flow was 40 and 38 percent, respectively.

Stream Gage 8022400 Calibration – Flow calibration results are shown in Figure 30. The low RMSE (0.62) and high E_{NS} (0.88) value indicates that predicted flow compares well with measured flow. The estimated and predicted base flow was 40 and 39 percent, respectively.

Stream Gage 8022400 Validation – Flow validation results are shown in Figure 31. The reasonable RMSE (2.53) and fair E_{NS} (0.61) value indicates that predicted flow compares well with measured flow.

The monthly time series shown reveals that SWAT under-predicts flow in some periods and over-predicts in others. This is most likely due to missing precipitation data in the station records or rainfall variability that is not reflected in the measured data. Rainfall variability is caused by localized thunderstorms occurring over climate stations or between stations, and spatial distribution of storms not accurately represented in the precipitation data input in SWAT.

Sediment Calibration: The predicted sediment load for Lake Murvaal for the 1957 through 1998 period was 8,020,390 tonnes, close to the measured sediment of 8,184,062 tonnes, and well within the 15 percent range designated for the project.

Nutrient Calibration: The nutrient calibration settings developed for the Sam Rayburn Watershed were used for this basin as well. Details are available in the Sam Rayburn report.

Conclusions

Part 1 of this report describes the calibration of the SWAT model for flow, sediment, and nutrients for the Toledo Bend Reservoir watershed. Monthly simulated flow was compared to measured stream gage values. Sediment yield into Lake Murvaal was compared to a sediment survey of the lake. Finally, nutrient calibration settings developed for the neighboring Sam Rayburn Watershed were applied to the Toledo Bend basin. The results indicated that the model was calibrated properly and performing well.

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Table 1. Profile of livestock operations in the §319(h) and SB 503 WQMPs – Toledo Bend Watershed.

Parameter	Harrison County SWCD 412	Pineywoods SWCD 429	Rusk SWCD 447	Panola SWCD 448	Shelby SWCD 449	Grand Total
WQMPs (no.) and (ha)	1 (43)	22 (1,285)	3 (227)	93 (6,395)	216 (10,344)	335 (18,294)
Breeders (no.)	0	0	0	126,260	906,433	1,032,693
Broilers (no.)	0	5,986,266	0	26,354,140	91,675,582	124,015,988
Pullets (no.)	0	0	0	0	1,419,934	1,419,934
Total Annual Bird Production (no.)	0	5,986,266	0	26,480,400	94,001,949	126,468,615
Breeder Manure Production (t)	0	0	0	2,382	14,207	16,590
Broiler Manure Production (t)	0	5,430	0	23,037	82,787	111,254
Pullet Manure Production (t)	0	0	0	0	3,224	3,224
Fish Farm Manure Production (t)	0	0	5	0	0	5
Dairy / Feedlot Manure Production (t)	0	0	0	68	0	68
Total Manure Production (t)	0	5,430	5	25,487	100,219	131,141
Nitrogen Produced, breeder (kg)	0	0	0	27,471	156,339	183,810
Nitrogen Produced, broiler (kg)	0	110,241	0	498,163	1,647,976	2,256,380
Nitrogen Produced, pullet (kg)	0	0	0	0	32,241	32,241
Nitrogen Produced, fish farm (kg)	0	0	245	0	0	245
Nitrogen Produced, dairy / feedlot (kg)	0	0	0	972	0	972
Nitrogen produced total (kg)	0	110,241	245	526,606	1,836,555	2,473,648
P2O5 Produced, breeder (kg)	0	0	0	54,943	312,678	367,622
P2O5 Produced, broiler (kg)	0	180,100	0	782,039	2,790,028	3,752,167
P2O5 Produced, pullet (kg)	0	0	0	0	74,366	74,366
P2O5 Produced, fish farm (kg)	0	0	106	0	0	106
P2O5 Produced, dairy / feedlot (kg)	0	0	0	2,152	0	2,152
P2O5 produced total (kg)	0	180,100	106	839,134	3,177,073	4,196,413

(table continued on next page)

Table 1. – continued

Parameter	Harrison County SWCD 412	Pineywoods SWCD 429	Rusk SWCD 447	Panola SWCD 448	Shelby SWCD 449	Grand Total
K2O Produced, breeder (kg)	0	0	0	35,460	177,658	213,117
K2O Produced, broiler (kg)	0	132,978	0	585,444	1,975,802	2,694,224
K2O Produced, pullet (kg)	0	0	0	0	40,302	40,302
K2O Produced, fish farm (kg)	0	0	25	0	0	25
K2O Produced, dairy / feedlot (kg)	0	0	0	993	0	993
K2O produced total (kg)	0	132,978	25	621,897	2,193,762	2,948,661
Breeder manure applied on farm (t)	0	0	0	641	3,316	3,957
Broiler manure applied on farm (t)	0	3,326	0	4,947	14,961	23,234
Pullet manure applied on farm (t)	0	0	0	0	1,487	1,487
Fish manure applied on farm (t)	0	0	5	0	0	5
Dairy / feedlot manure applied on farm (t)	0	0	0	68	0	68
Total manure applied on farm (t)	0	3,326	5	5,656	19,764	28,751
Breeder manure applied off farm (t)	0	0	0	1,741	10,892	12,633
Broiler manure applied off farm (t)	0	2,105	0	18,090	67,826	88,021
Pullet manure applied off farm (t)	0	0	0	0	1,737	1,737
Fish manure applied off farm (t)	0	0	0	0	0	0
Dairy / feedlot manure applied off farm (t)	0	0	0	0	0	0
Total manure applied off farm (t)	0	2,105	0	19,831	80,455	102,390

*There are three levels of poultry production: pullet growers, breeder producers, and broiler farms. Pullet growers raise the hens from chicks to about six months old, which are collected and moved to the breeder farms. There, the breeder hens produce broiler eggs. The eggs are collected and taken to a hatchery. The hatchlings are then sent to the broiler growers, who raise the chickens for meat. Broiler producers grow about six flocks per year.

** metric tonnes (t)

Table 2. Land use/cover in Toledo Bend Watershed.

Description	Hectares	Acres	Cover (%)
Cropland	969	2,394	0.10%
Urban	45,290	111,913	4.84%
Pasture	151,695	374,846	16.22%
Brushy Rangeland	87,766	216,875	9.38%
Open Rangeland	1,119	2,765	0.12%
Water	63,401	156,667	6.78%
Forest Evergreen	277,947	686,819	29.71%
Forest Deciduous	33,117	81,834	3.54%
Forest Mixed	99,041	244,734	10.59%
Wetland Forested	164,225	405,808	17.56%
Wetland Mixed	10,888	26,905	1.16%
Total	935,458	2,311,560	100.00%

Table 3. Climate stations used in Toledo Bend Watershed simulations.

Station Number	Station Name	Data Type	Start Date	End Date
411089	Broadus 1 Ne	Precip	1977	2007
414081	Henderson	Temp & Precip	1908	2007
411578	Center	Temp & Precip	1922	2007
411711	Chireno	Precip	1989	2007
411089	Broadus 1 Ne	Precip	1977	2007
417951	San Augustine	Precip	1909	2007
417040	Pineland	Precip	1965	2007
411094	Bronson	Temp & Precip	1924	1979
417936	Sam Rayburn Dam	Temp & Precip	1968	2007
417547	Reklaw	Precip	1958	1988
416177	Nacogdoches	Temp & Precip	1948	2007
416265	Neuville	Precip	1940	2007
417700	Rockland 2 Nw	Temp & Precip	1904	1979
411500	Carthage	Temp & Precip	1908	2007
414076	Hemphill	Temp & Precip	1967	1992
414077	Hemphill 6 Ne	Precip	1992	2007
415081	Latex	Precip	1942	1963
415348	Longview 11 Se	Temp & Precip	1975	2007
162023	Converse	Temp & Precip	1944	1986
163657	Gloster 1 W	Precip	1947	1981
165522	Logansport	Temp & Precip	1903	2007
165527	Logansport 4 Ene	Temp & Precip	1968	1993
165874	Mansfield	Temp & Precip	1896	2007
165892	Many	Temp & Precip	1953	2007
165896	Many 8 Wsw	Precip	1989	2007
169980	Zwolle 2 Nw	Precip	1989	2007

Table 4. SWAT Input Variables For Flow and Sediment Calibration.

Variable	Adjustment
Runoff curve number adjustment - Subbasins 15, 16, 99, 106	-1
Subbasins 1-8, 11-14, 17, 18-30, 31-56, 59-73-80, 84-98, 100, 102, 104, 105, 107	-2
Subbasins 57, 58, 103	-3
Subbasins 81-83	-10
Subbasins 9, 10, 101	3
Manning's "N" value for the main channel	0.06
Baseflow alpha factor for bank storage (days)	0.02
Channel erodibility factor	0.50
Channel cover factor	0.50
Channel transmission loss (mm/hour) - subbasins 9, 10, 15, 16, 57, 58, 99, 100, 101, 103, 106, 107	1.00
Channel transmission loss (mm/hour) - all other subbasins	10.00
Minimum shallow aquifer storage for groundwater flow (mm) - subbasin 81, 82, 83	15.00
Subbasins 9, 10, 101	3.00
Subbasins 100, 107	4.50
Subbasins 15, 16, 99, 106	4.75
Subbasins 57, 58, 103	8.00
Subbasins - all other subbasins	2.00
Minimum shallow aquifer storage for re-evaporation (mm) - subbasins 81, 82, 83	0.25
Minimum shallow aquifer storage for re-evaporation (mm) - subbasins 1-28, 31-34, 57, 58, 99-103, 106, 100, 107	5.00
Minimum shallow aquifer storage for re-evaporation (mm) - all other subbasins	15.00
Shallow aquifer re-evaporation coefficient - forest landuses	0.20
Shallow aquifer re-evaporation coefficient - all other landuses	0.10
Ground water delay (days)	75.00
Baseflow alpha factor (days)	0.0184
Subbasin transmission loss (mm/hour) - subbasins 1-28, 31-34, 57-58, 99-103, 106, 107	1.00
Subbasin transmission loss (mm/hour) - all other subbasins	10.00
Manning's "N" value for the tributary channels	0.06
Initial residue (kg/ha) - forest landuses	5000
Initial residue (kg/ha) - all other landuses	2000
Soil evaporation compensation factor - subbasins 1-28, 31-34, 57-58, 99-103, 106, 107	0.50
Soil evaporation compensation factor - all other subbasins	0.40
Maximum canopy storage - forest landuses (mm/hour)	50.00
Maximum canopy storage - all other landuses (mm/hour)	0.00
Residue decomposition coefficient	0.05
Re-entrainment of channel sediment – exponent	0.50
Re-entrainment of channel sediment – linear	0.001
Peak rate function	1.00
Surface lag - subbasins 9, 10, 81, 82, 83, 101	2.00
Surface lag - all other subbasins	4.00
Reservoir seepage rate (mm/hour)	0.10
Soil available water capacity (mm H ₂ O/mm soil)	none

Table 5. Stream gages used in Toledo Bend Watershed simulations.

Station Number	Station Name	Calibration Period		Validation Period	
		Start Date	End Date	Start Date	End Date
8022070	Martin Creek near Tatum, TX	1/1/1975	12/31/1985	1/1/1986	12/31/1995
8022300	Murvaul Bayou near Gary, TX	1/1/1959	12/31/1970	1/1/1971	12/31/1982
8023200	Tenaha Creek near Shelbyville, TX	1/1/1953	12/31/1966	1/1/1967	12/31/1980
8024500	Palo Gaucho Bayou near Hemphill, TX	1/1/1953	12/31/1958	1/1/1959	12/31/1964
8022400	Socagee Creek near Carthage, TX	1/1/1963	12/31/1967	1/1/1968	12/31/1972
8024400	Sabine River near Milam, TX	1/1/1950	12/31/1957	1/1/1958	12/31/1965
8022500	On Sabine River near Logansport, LA	5/1/1950	12/31/1957	1/1/1958	12/31/1965

Table 6. Parameters used in nitrogen calibration.

Input Parameter	Description	Value
NPERCO	Nitrate percolation coefficient (m^3/Mg)	0.01
RS3	Benthic source rate for NH_4-N in reach at $20^\circ C$ ($mg\ NH_4-N/(m^2\ day)$)	0.00
RS4	Rate coefficient for organic N settling in the reach at $20^\circ C$ (day^{-1})	0.20
AI1	Fraction of algal biomass that is nitrogen ($mg\ N /mg\ alg$)	0.06
BC3	Rate constant for hydrolysis of organic N to NH_4 in the reach at $20^\circ C$ (day^{-1})	0.21
N_UPDIS	Nitrogen uptake distribution parameter	50.00

Table 7. Parameters used in phosphorous calibration.

Input Parameter	Description	Value
PPERCO	Phosphorous percolation coefficient (m^3/Mg)	7.00
PHOSKD	Phosphorous soil partitioning coefficient (m^3/Mg)	100.00
CMN	Rate factor of humus mineralization	0.00
P_UPDIS	Phosphorous uptake distribution parameter	10.00
RS2	Benthic source rate for dissolved phosphorous in reach ($mg\ dissolved\ P/(m^2\ day)$)	0.25
RS5	Organic phosphorous settling rate at $20^\circ C$ (day^{-1})	0.00
AI2	Fraction of algal biomass that is phosphorous ($mg\ P/mg\ alg$)	0.03
GWSOLP	Concen. of soluble phosphorous in groundwater contribution to streamflow ($mg\ P/L$)	0.01
SOL_ORG P	Initial soluble P concentration in soil layer (mg/kg)	300.00
SOL_SOL P	Initial organic P concentration in soil layer (mg/kg)	300.00

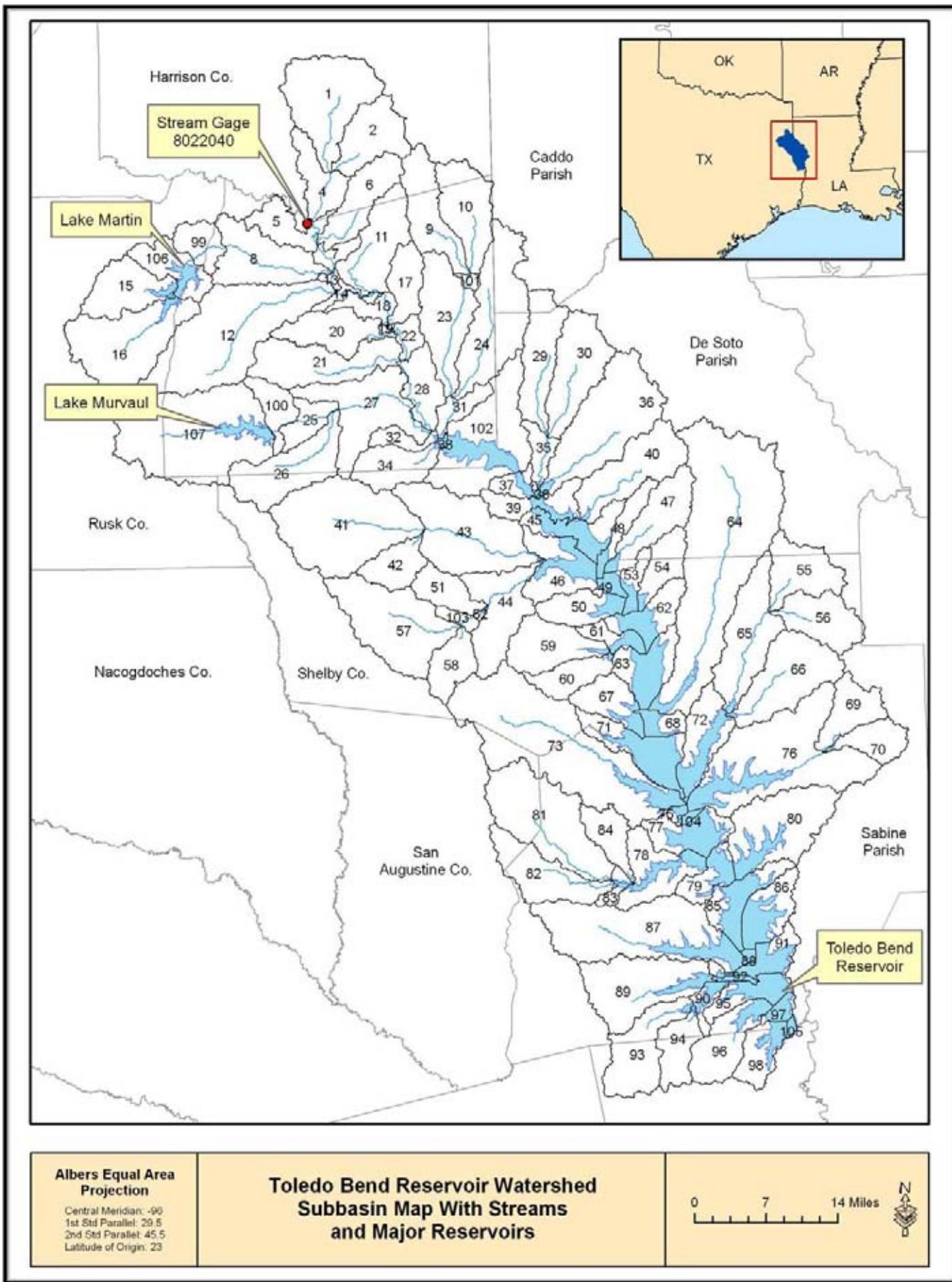


Figure 1. Toledo Bend Watershed subbasin map with major streams and reservoirs.

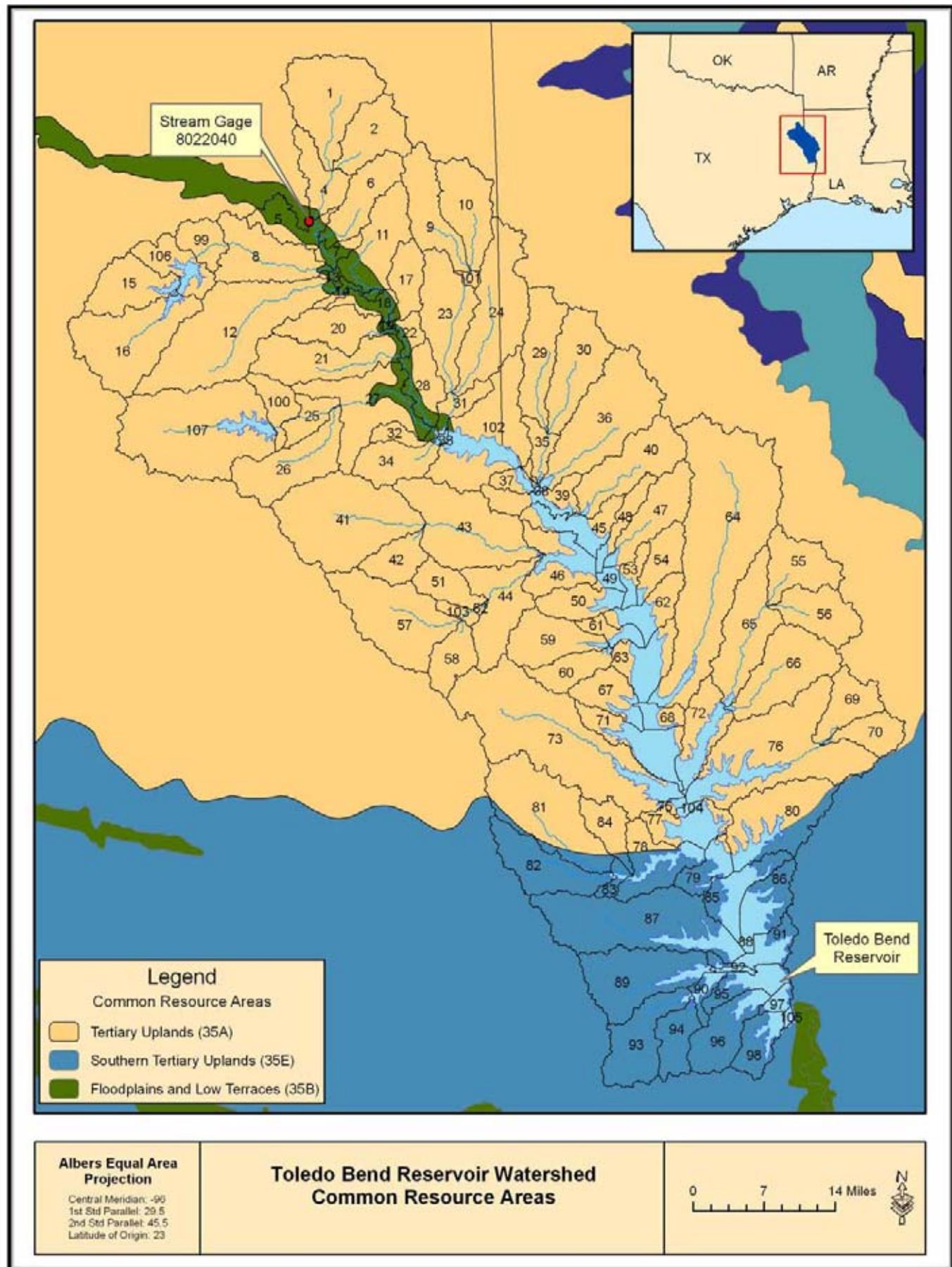


Figure 2. Toledo Bend Watershed common resource areas.

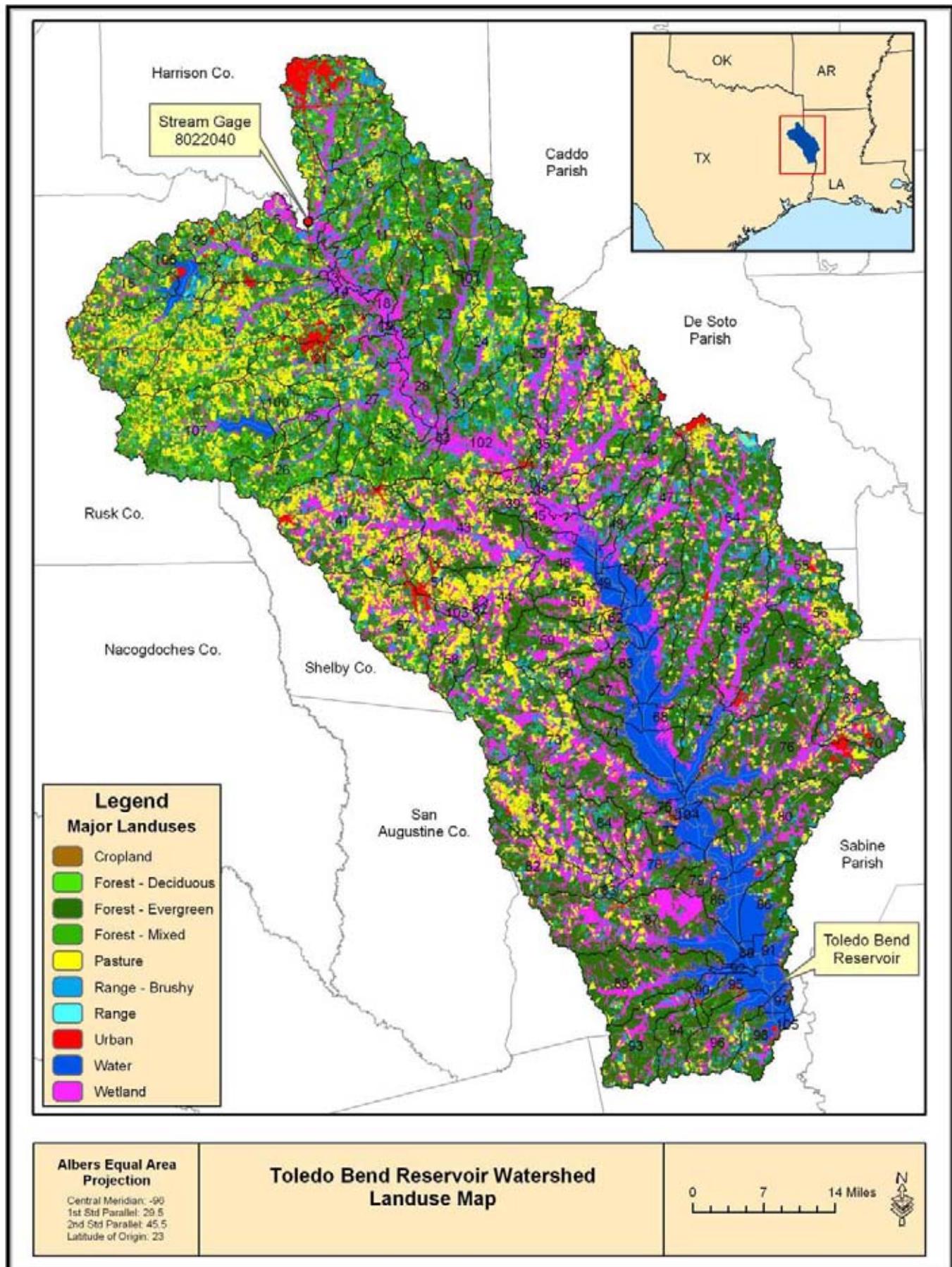


Figure 3. Toledo Bend Watershed land use/cover map.

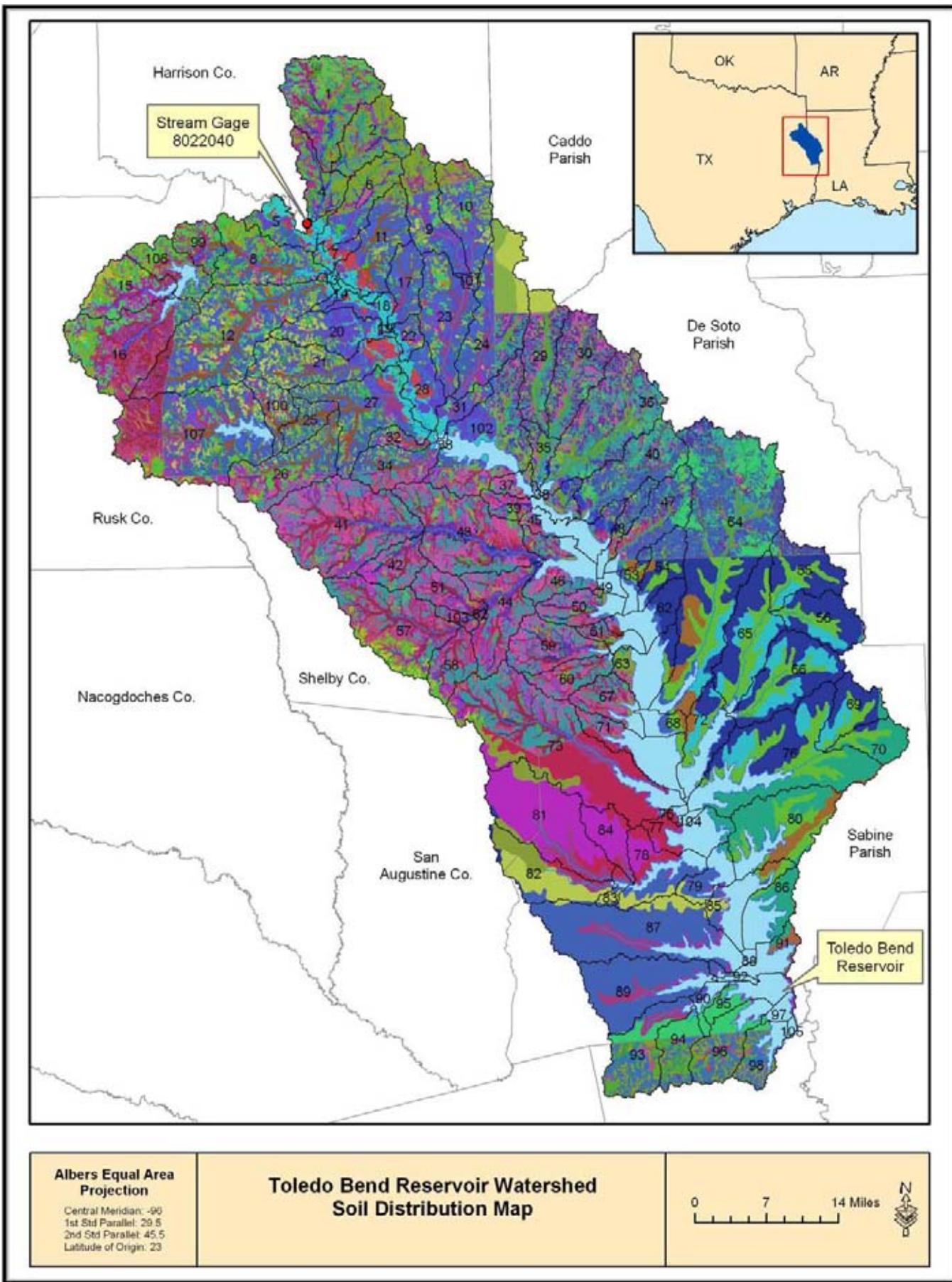


Figure 4. Toledo Bend Watershed SSURGO and STATSGO soil map.

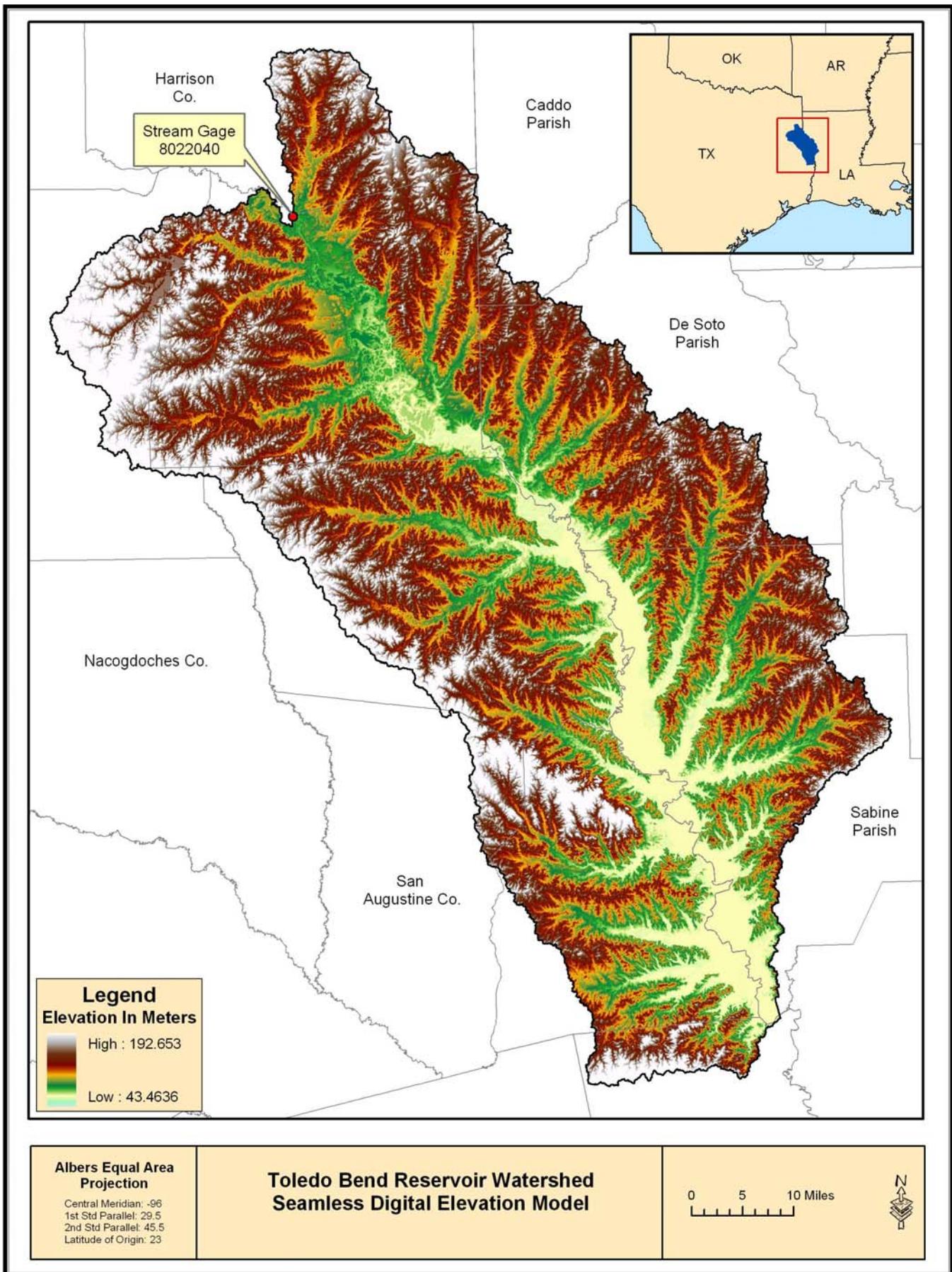


Figure 5. Toledo Bend Watershed seamless digital elevation model.

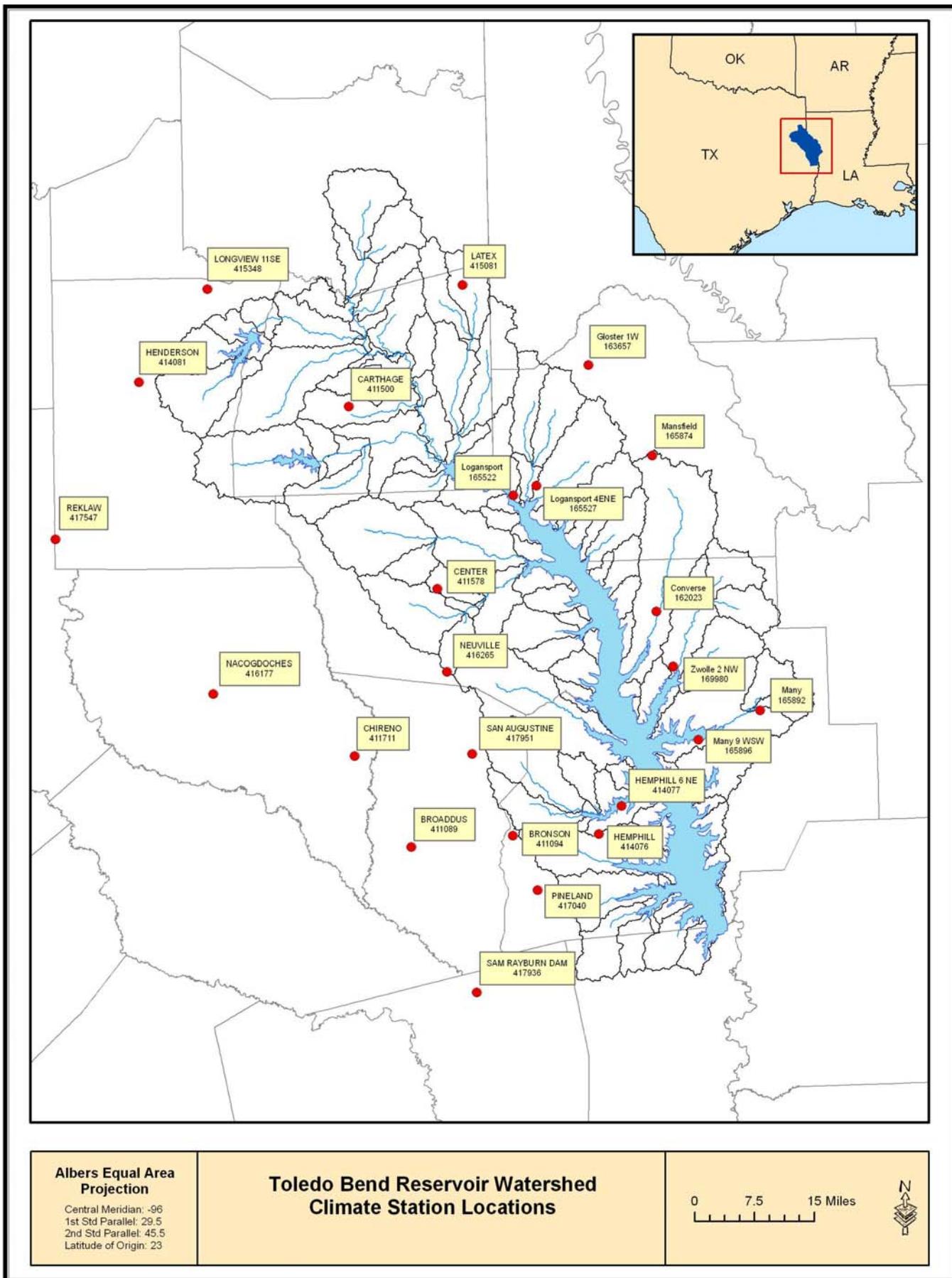


Figure 6. Toledo Bend Watershed climate station locations.

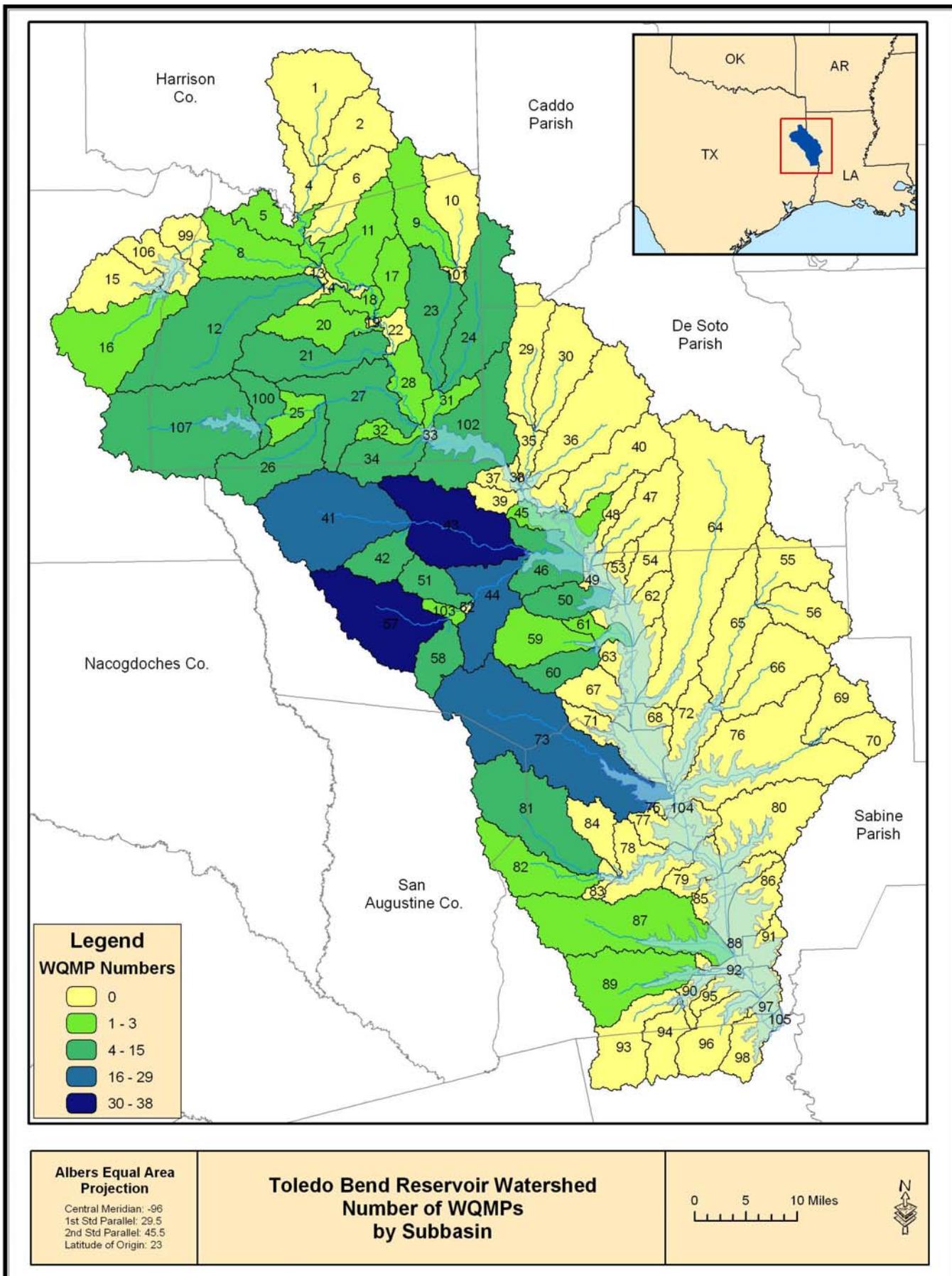


Figure 7. Toledo Bend Watershed number of WQMPs by subbasin.

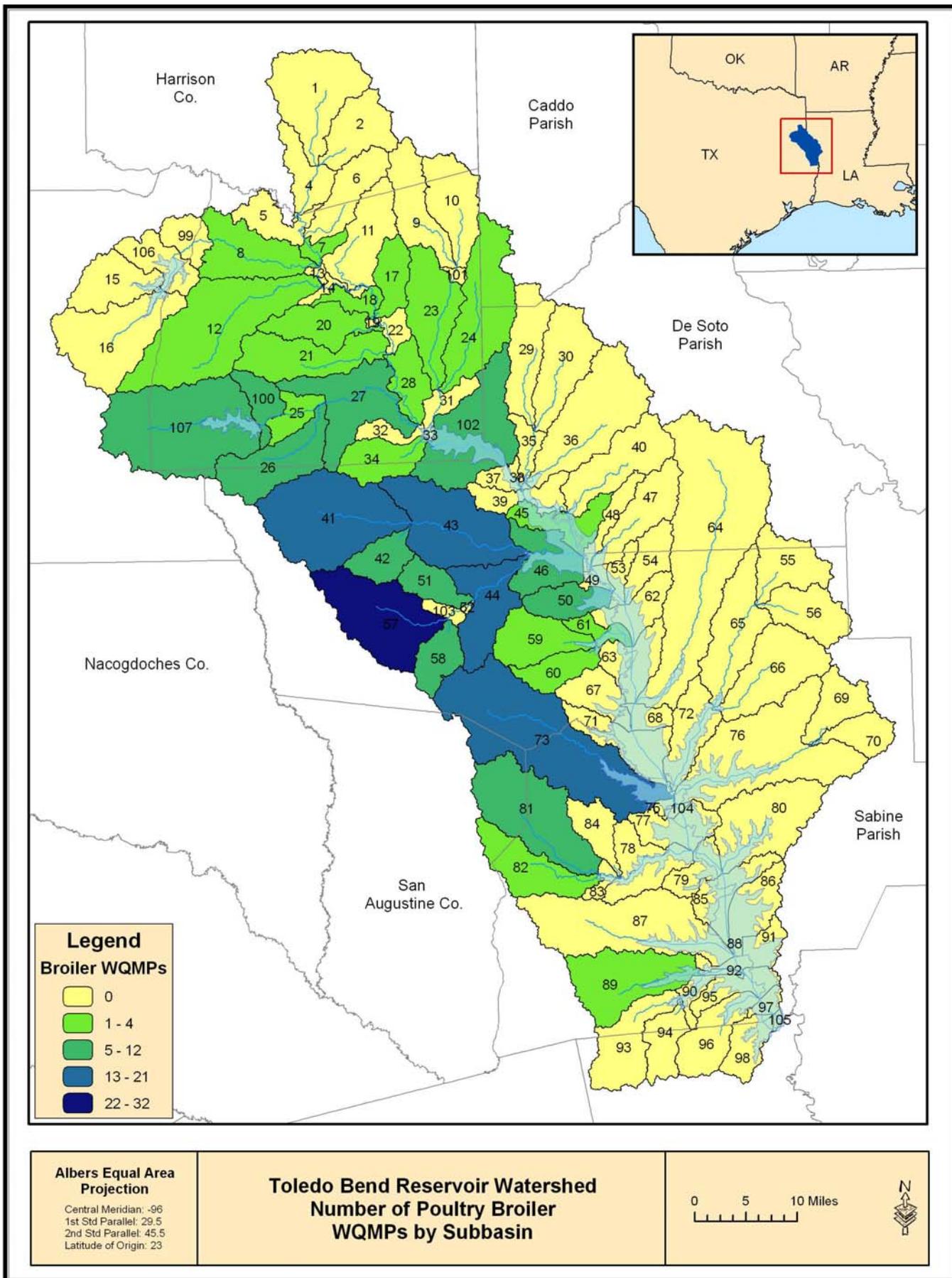


Figure 8. Toledo Bend Watershed number of broiler WQMPs by subbasin.

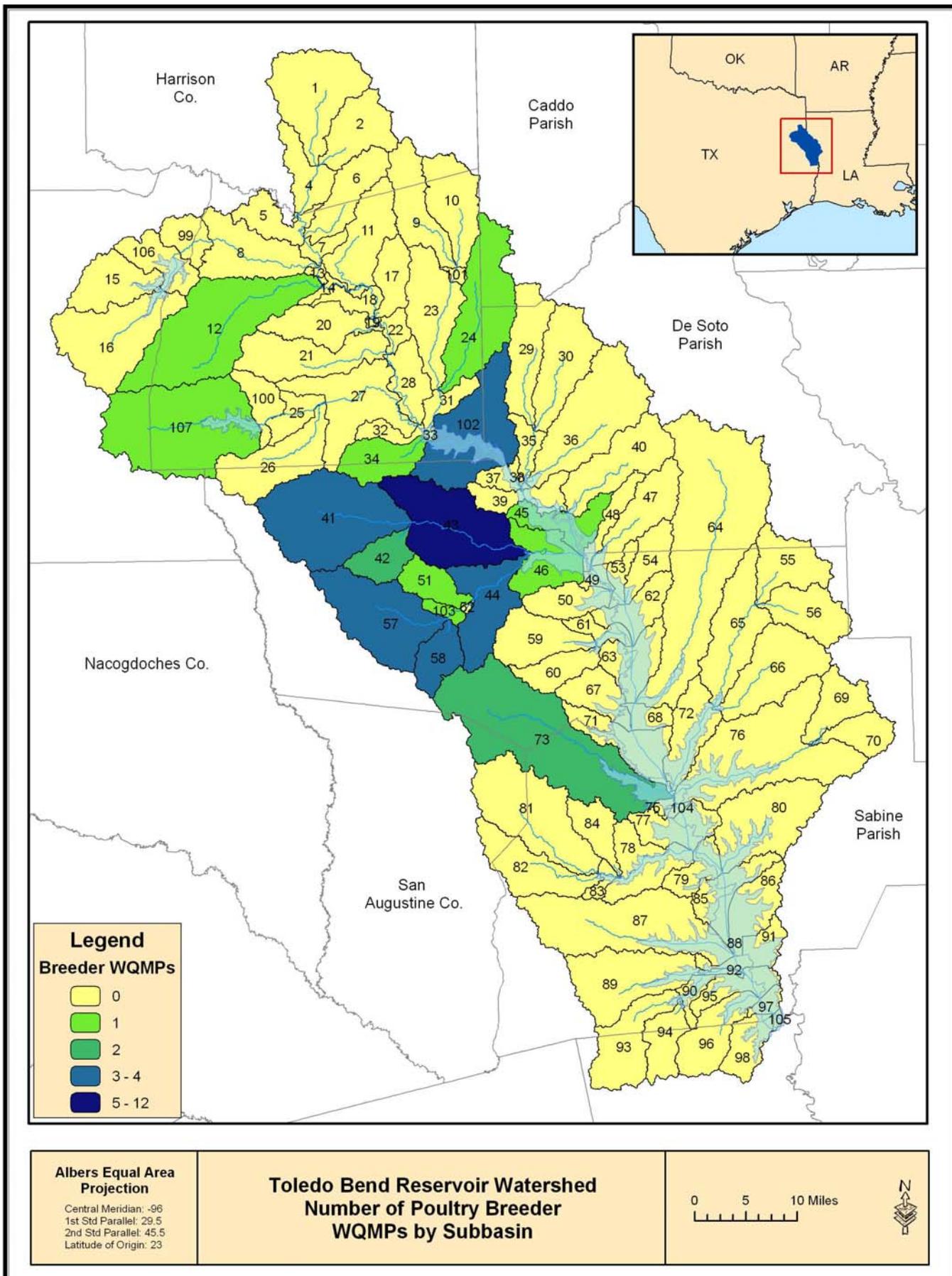


Figure 9. Toledo Bend Watershed number of breeder WQMPs by subbasin.

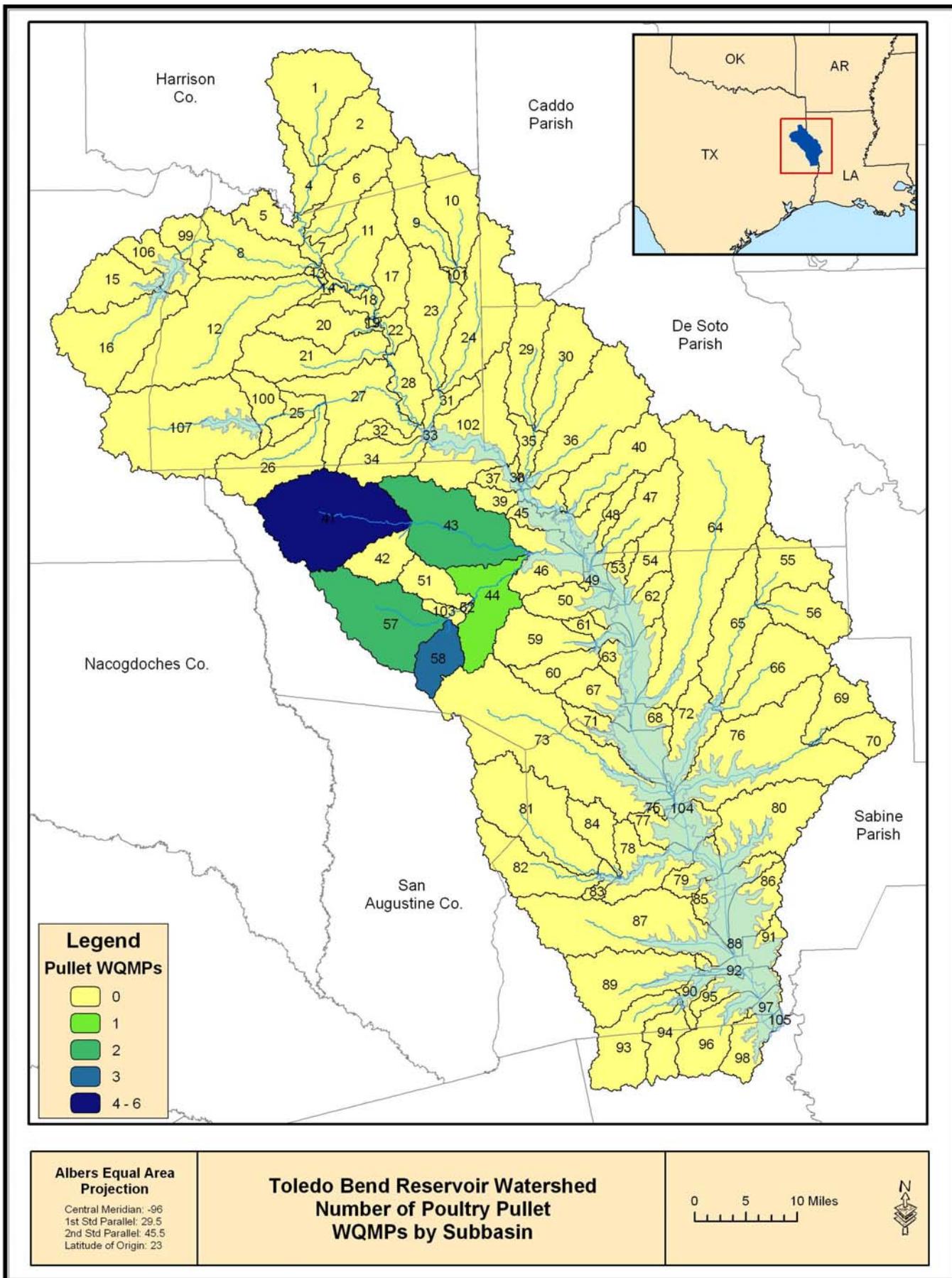


Figure 10. Toledo Bend Watershed number of poultry pullet WQMPs by subbasin.

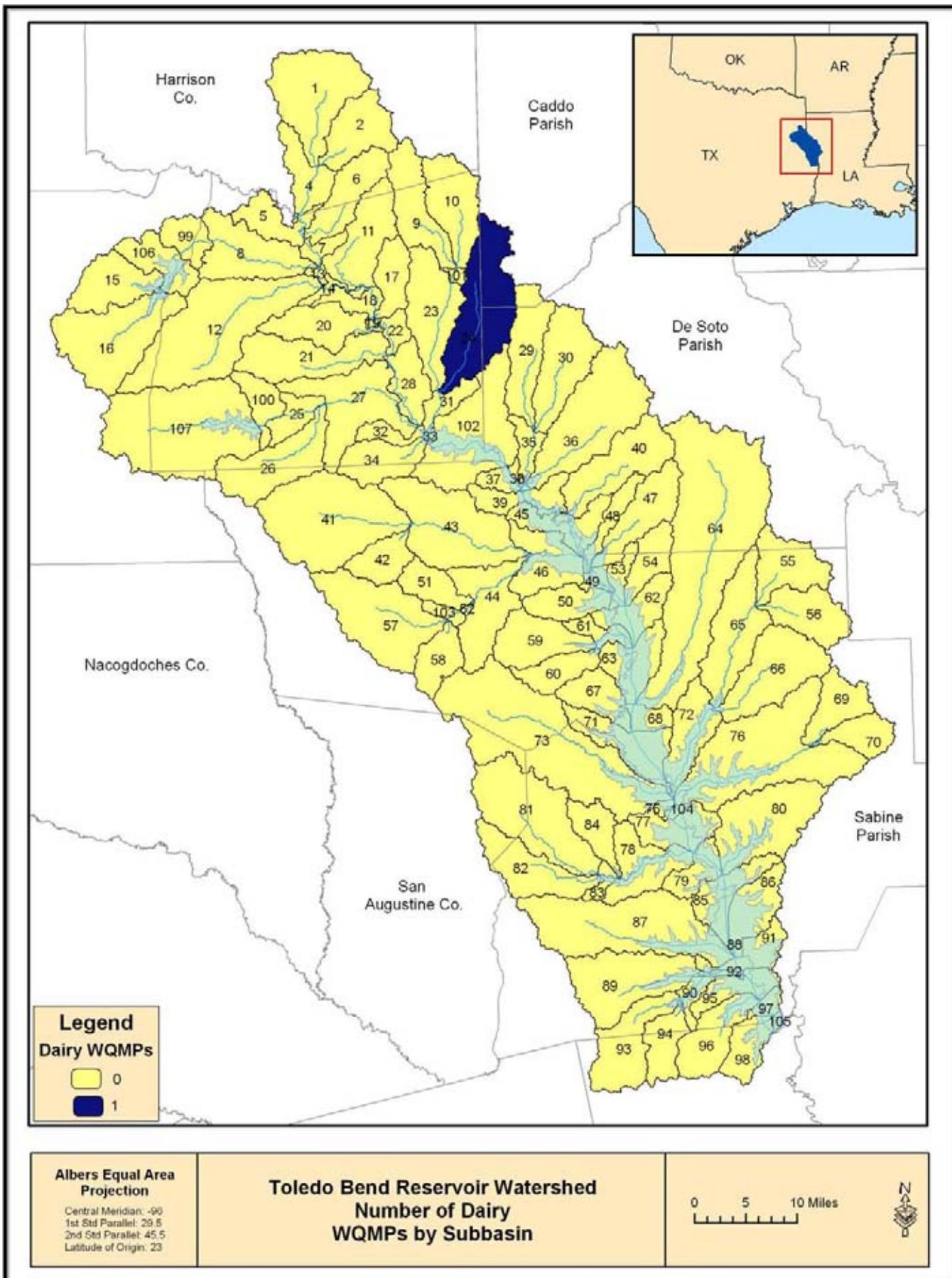


Figure 11. Toledo Bend Watershed number of dairy WQMPs by subbasin.

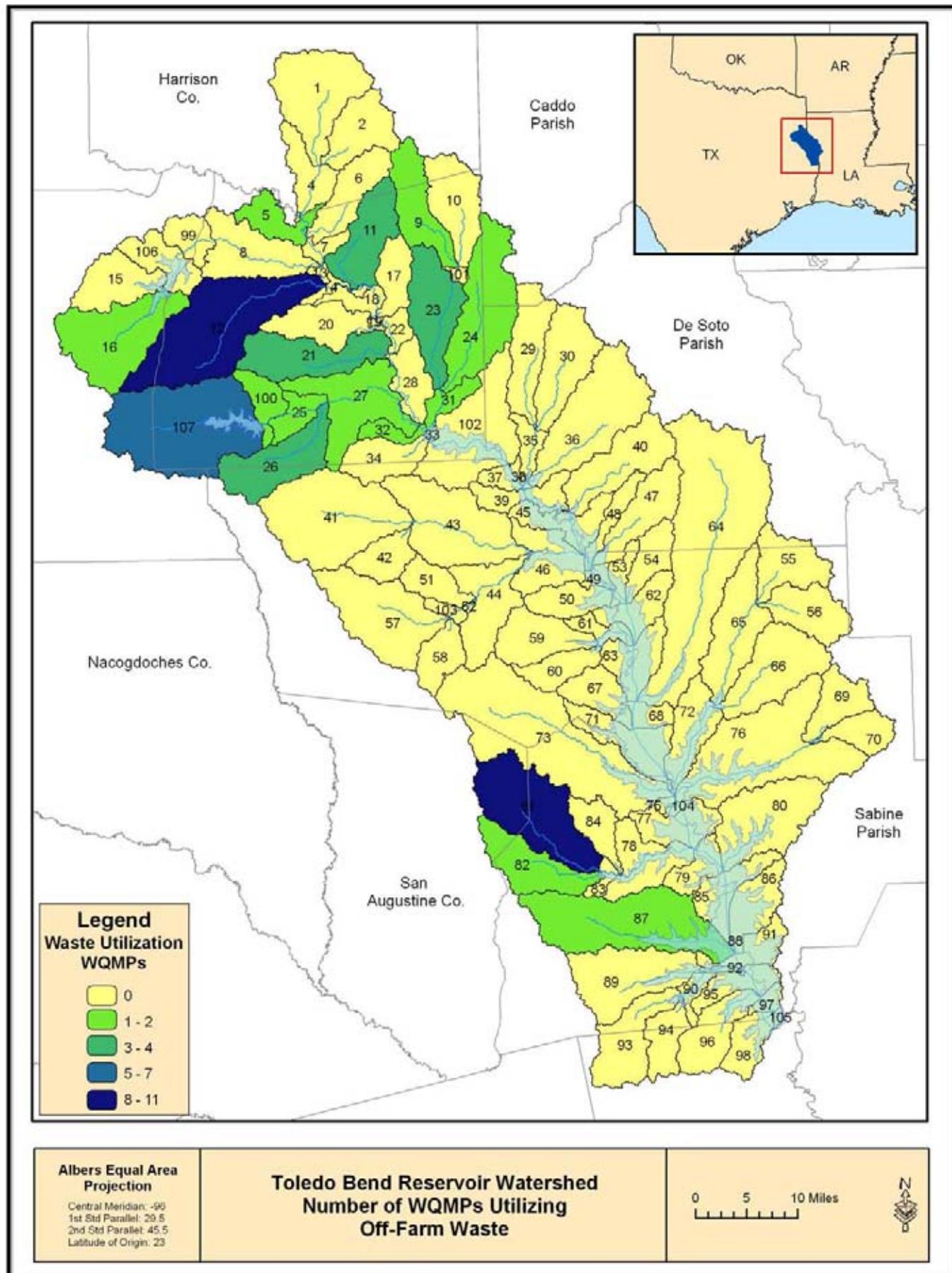


Figure 12. Toledo Bend Watershed number of WQMPs utilizing off-farm waste by subbasin.

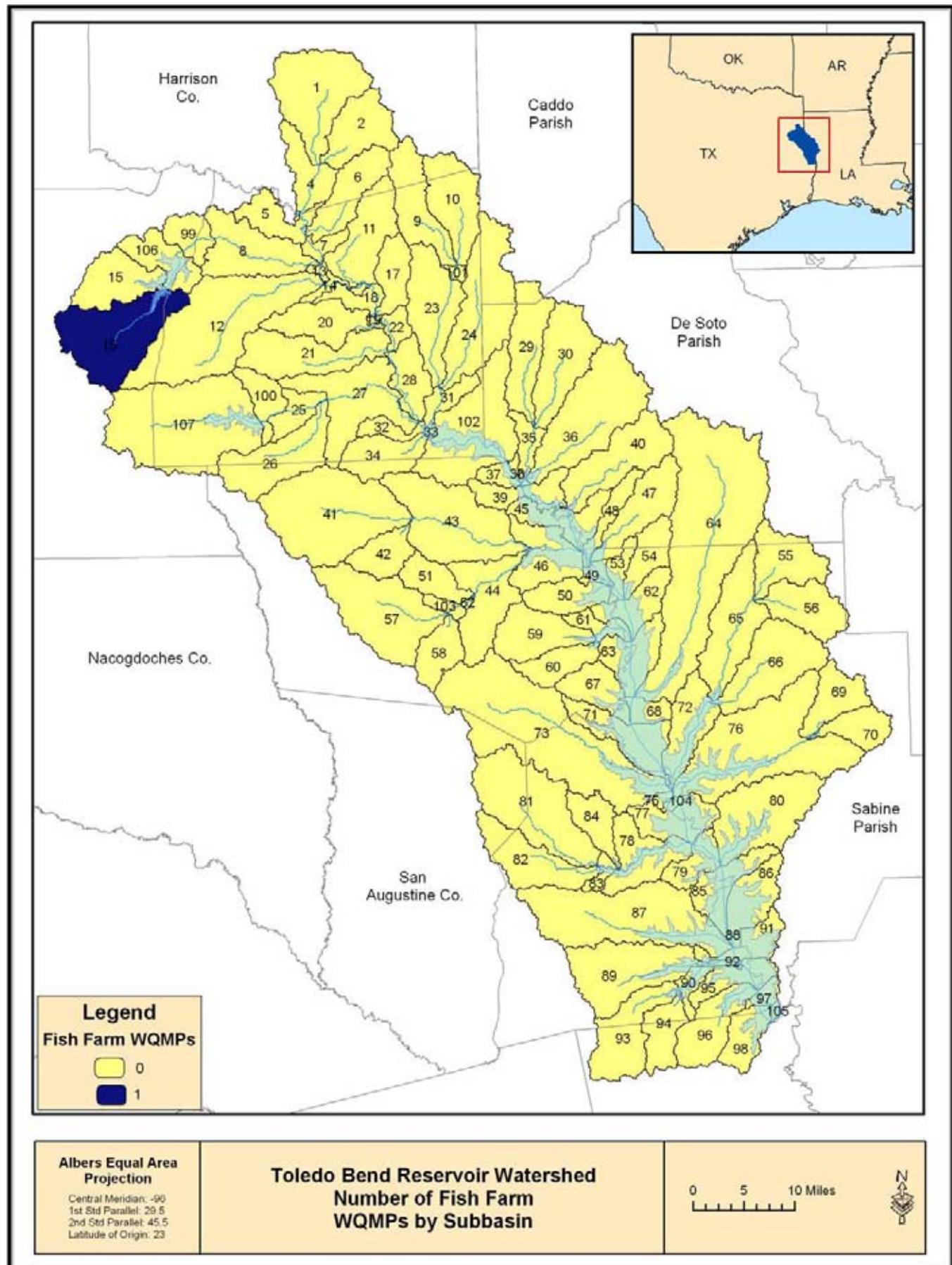


Figure 13. Toledo Bend Watershed number of fish farm WQMPs by subbasin.

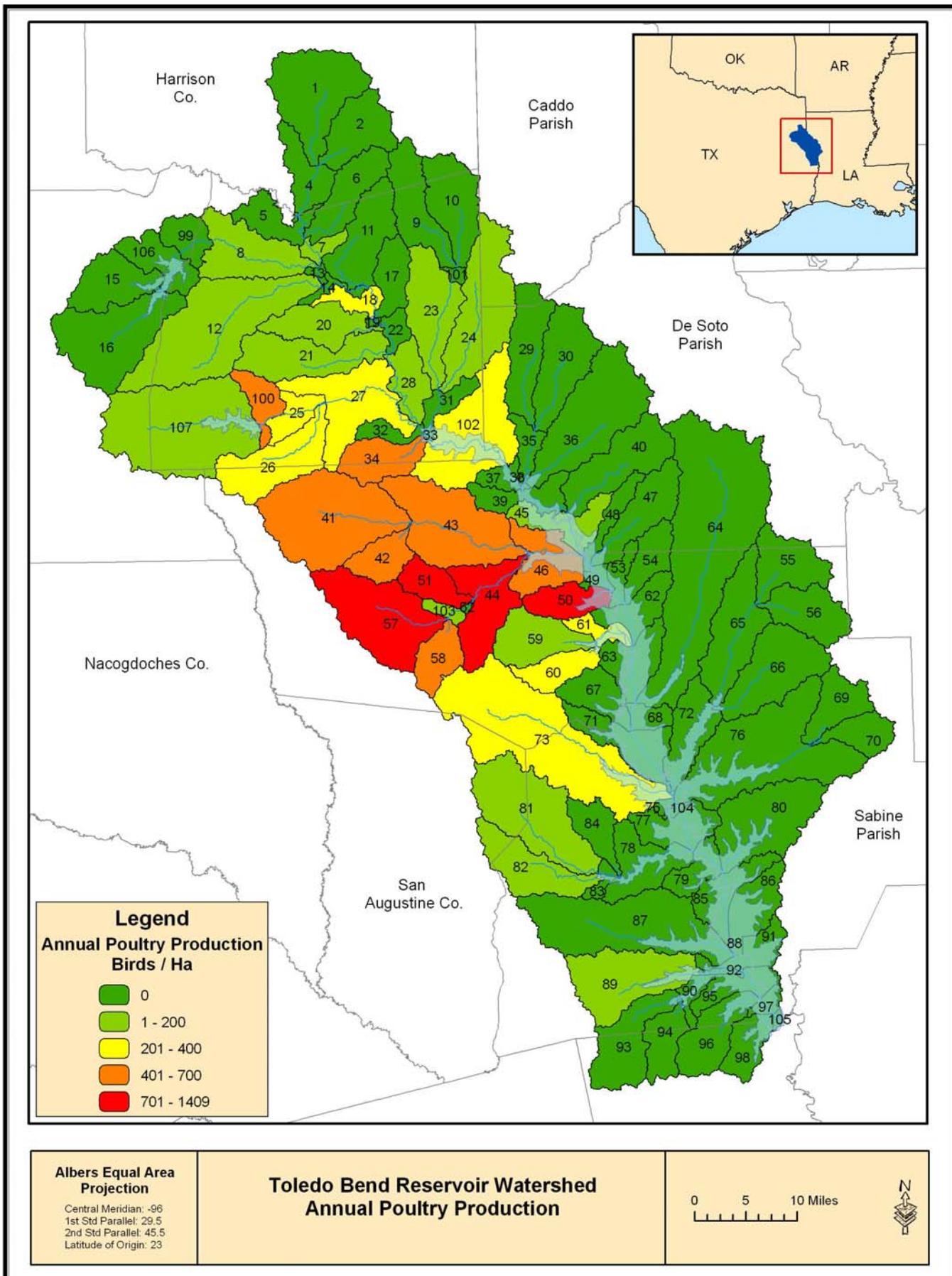


Figure 14. Toledo Bend Watershed annual poultry production by subbasin.

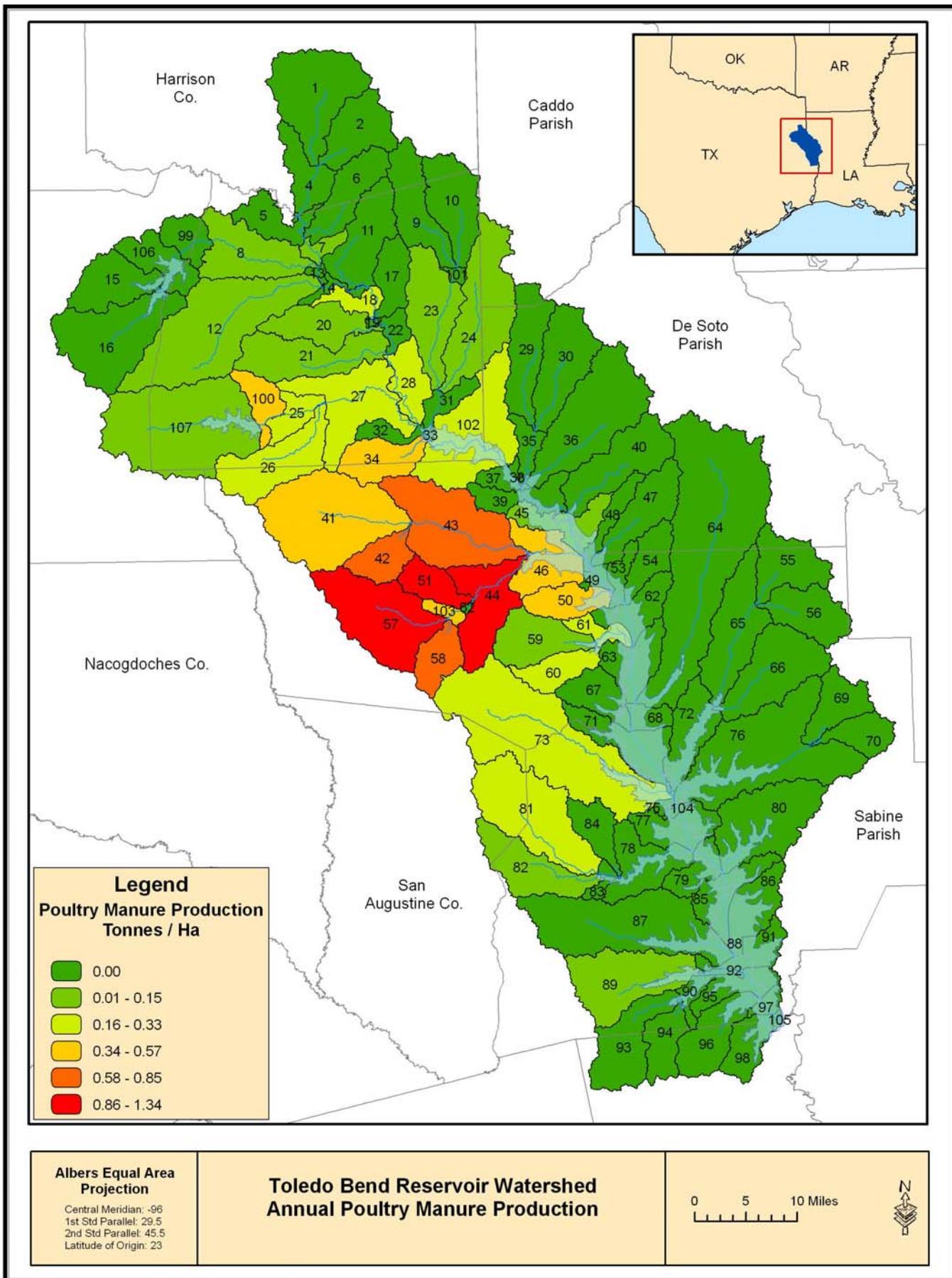


Figure 15. Toledo Bend Watershed annual poultry manure production by subbasin.

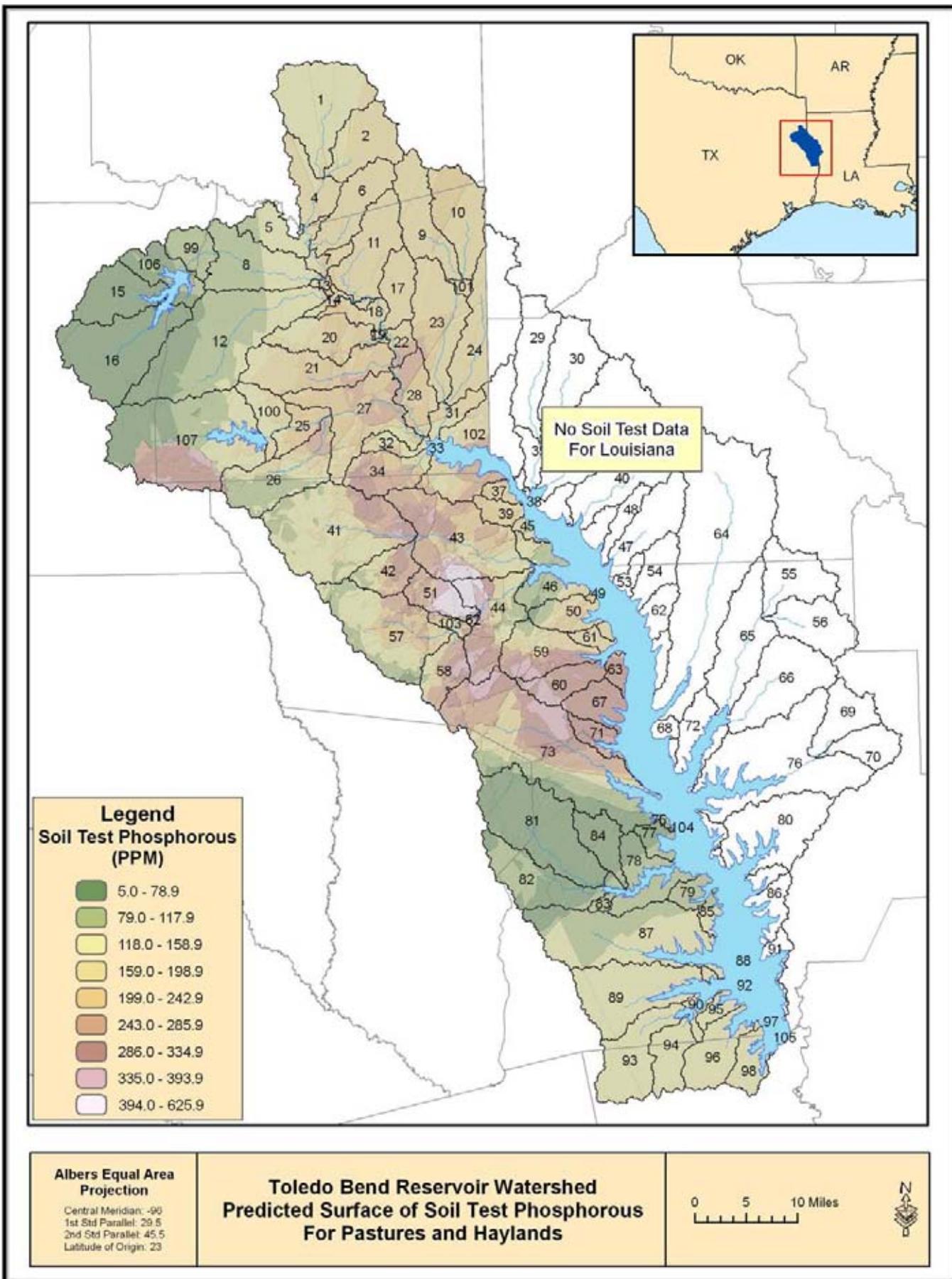


Figure 16. Toledo Bend Watershed – Predicted surface of soil test phosphorous for pastures and hayfields.

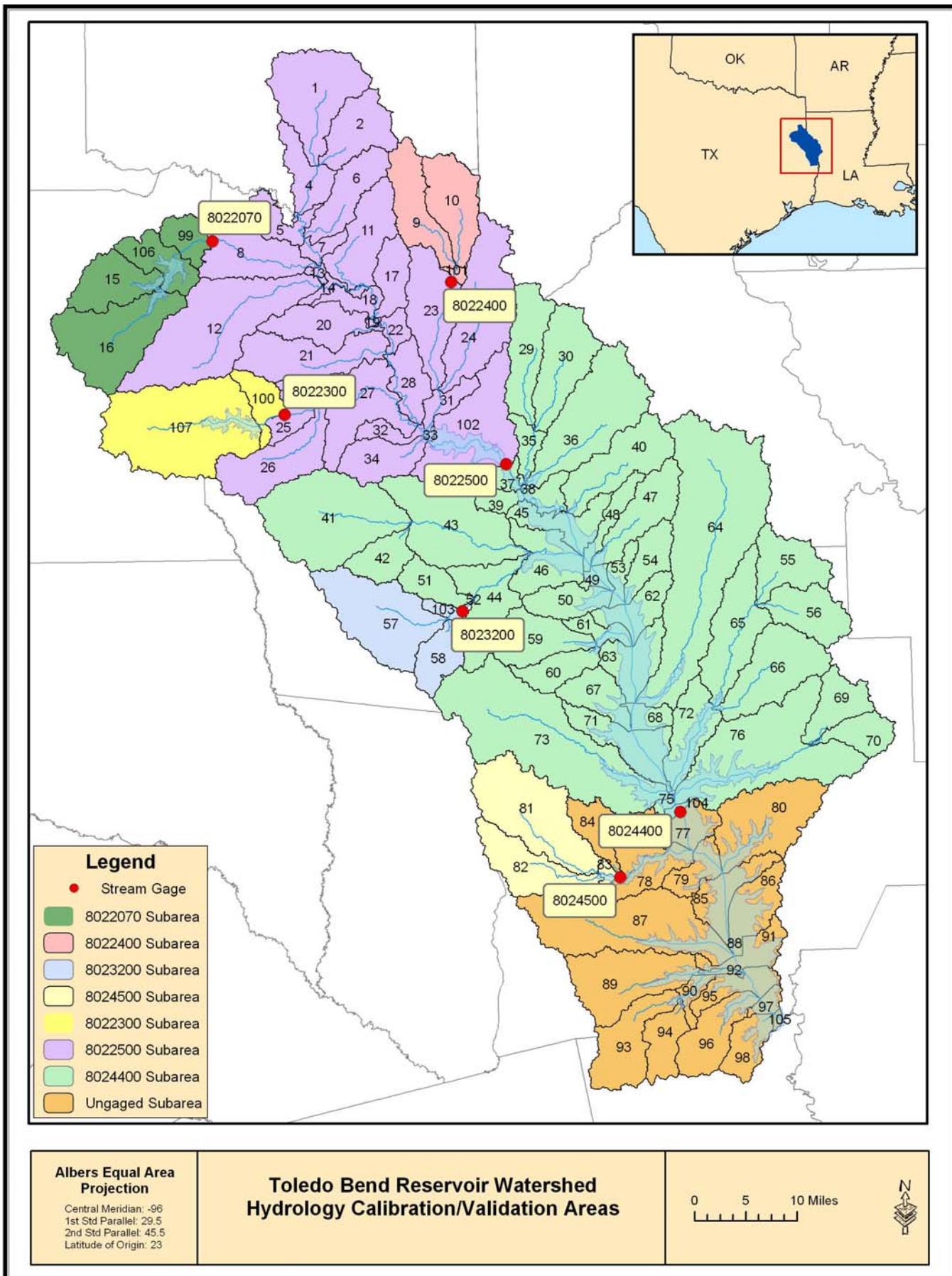


Figure 17. Toledo Bend Watershed hydrology calibration/validation areas.

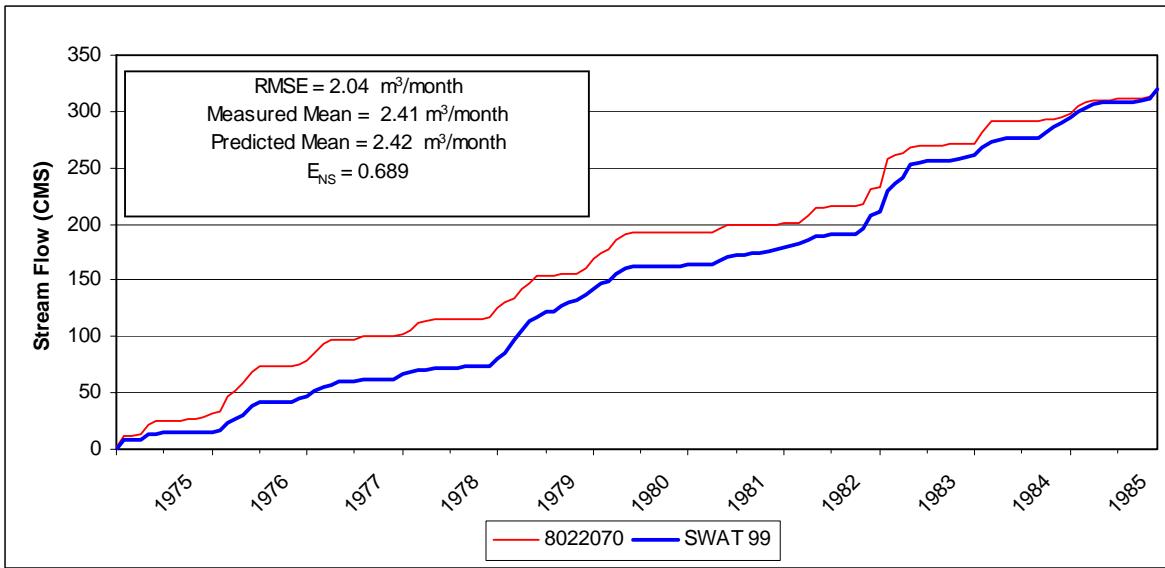


Figure 18. Cumulative monthly measured and predicted stream flow at gage 8022070 (Martin Creek near Tatum, TX), 1/1/1975 through 12/31/1985. This period was used for flow calibration. Monthly statistics are shown in the box.

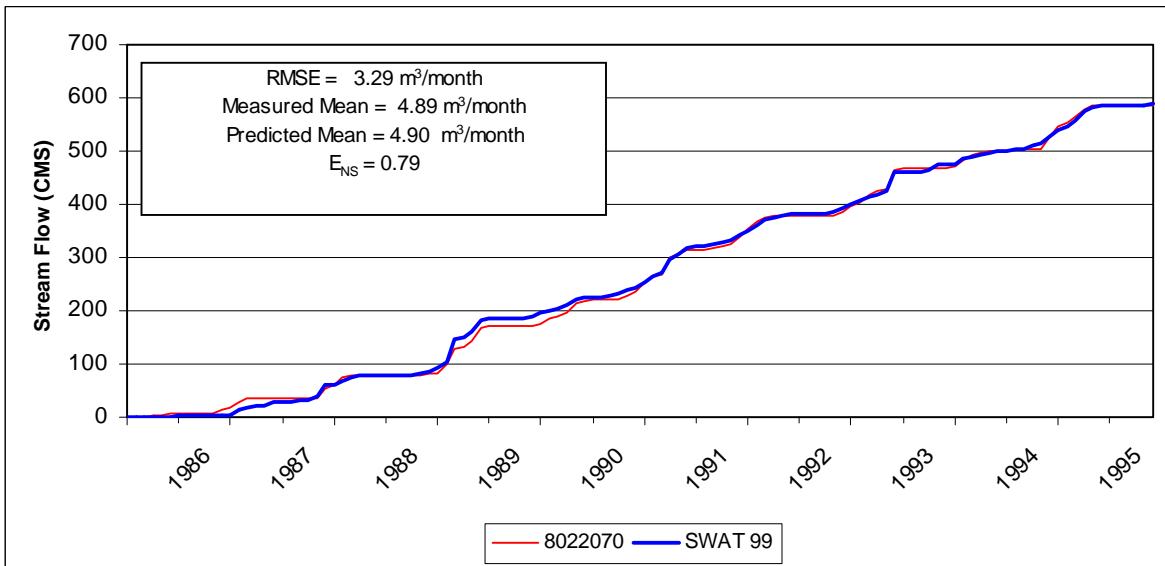


Figure 19. Cumulative monthly measured and predicted stream flow at gage 8022070 (Martin Creek near Tatum, TX), 1/1/1986 through 12/31/1995. This period was used for flow validation. Monthly statistics are shown in the box.

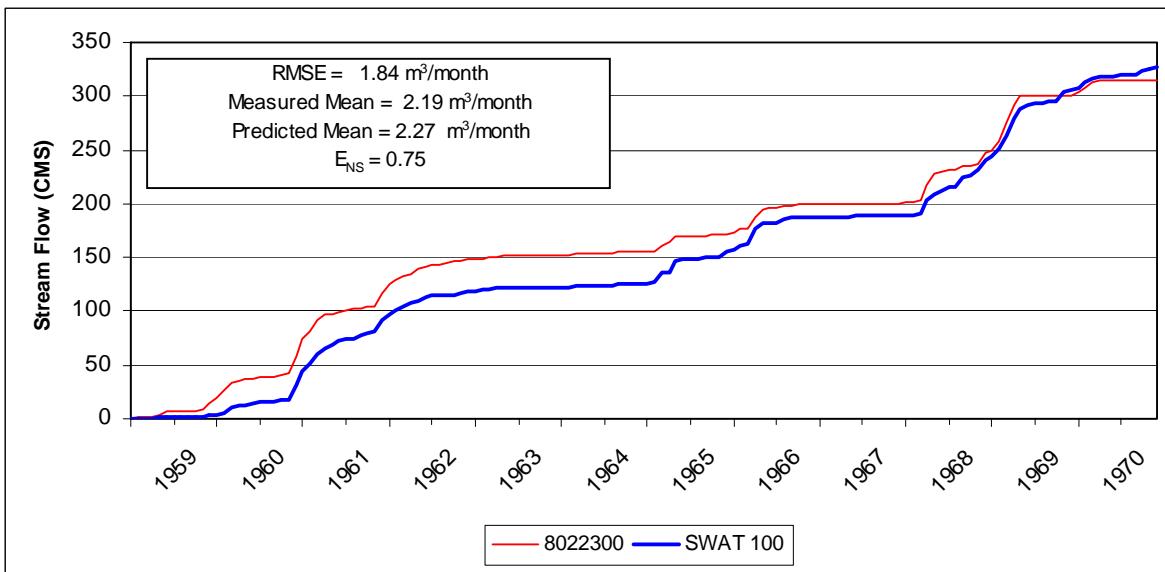


Figure 20. Cumulative monthly measured and predicted stream flow at gage 8022300 (Murvaul Bayou near Gary, TX), 1/1/1959 through 12/31/1970. This period was used for flow calibration. Monthly statistics are shown in the box.

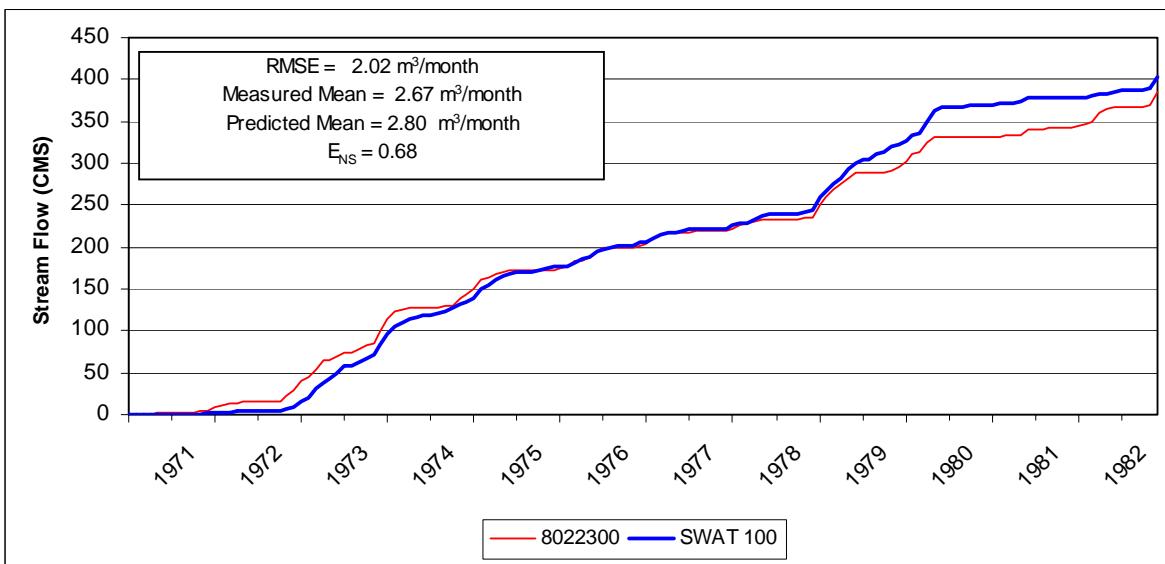


Figure 21. Cumulative monthly measured and predicted stream flow at gage 8022300 (Murvaul Bayou near Gary, TX), 1/1/1971 through 9/30/1982. This period was used for flow validation. Monthly statistics are shown in the box.

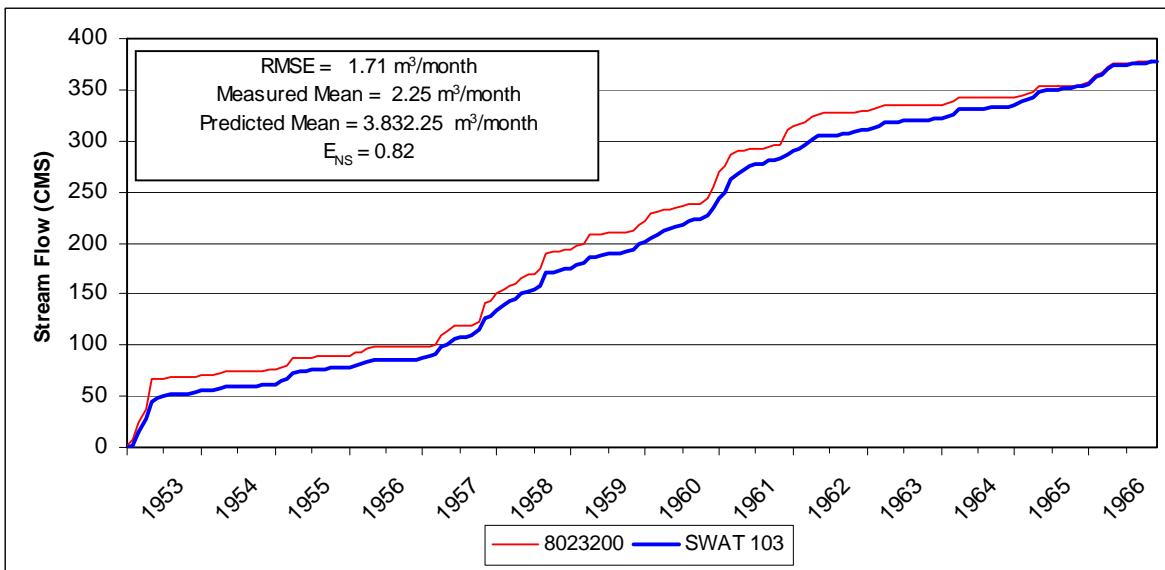


Figure 22. Cumulative monthly measured and predicted stream flow at gage 8023200 (Tenaha Creek near Shelbyville, TX), 1/1/1953 through 12/31/1966. This period was used for flow calibration. Monthly statistics are shown in the box.

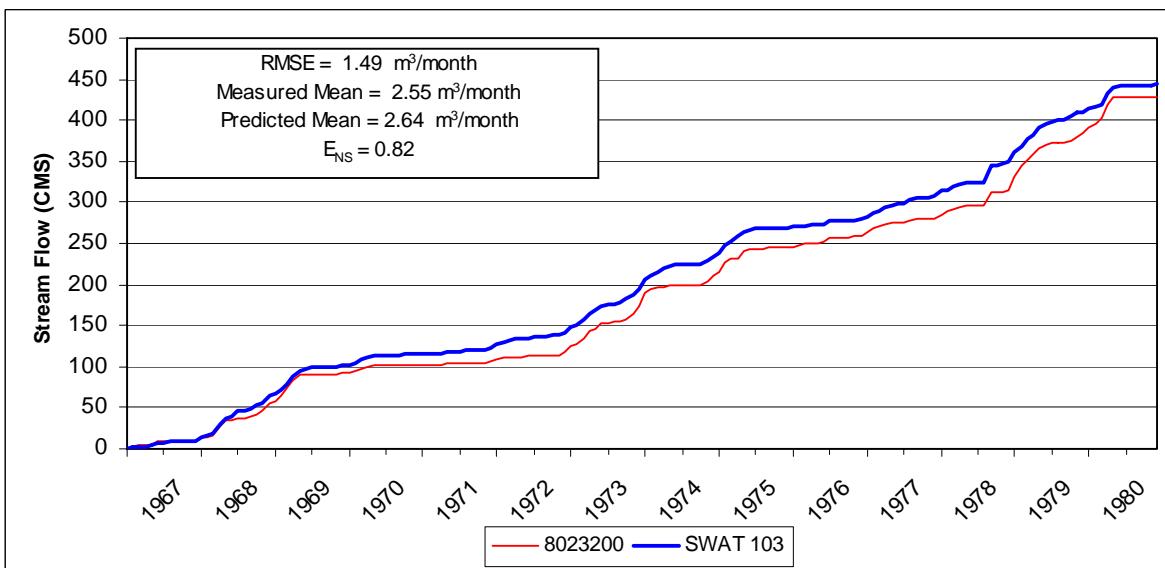


Figure 23. Cumulative monthly measured and predicted stream flow at gage 8023200 (Tenaha Creek near Shelbyville, TX), 1/1/1967 through 12/31/1980. This period was used for flow validation. Monthly statistics are shown in the box.

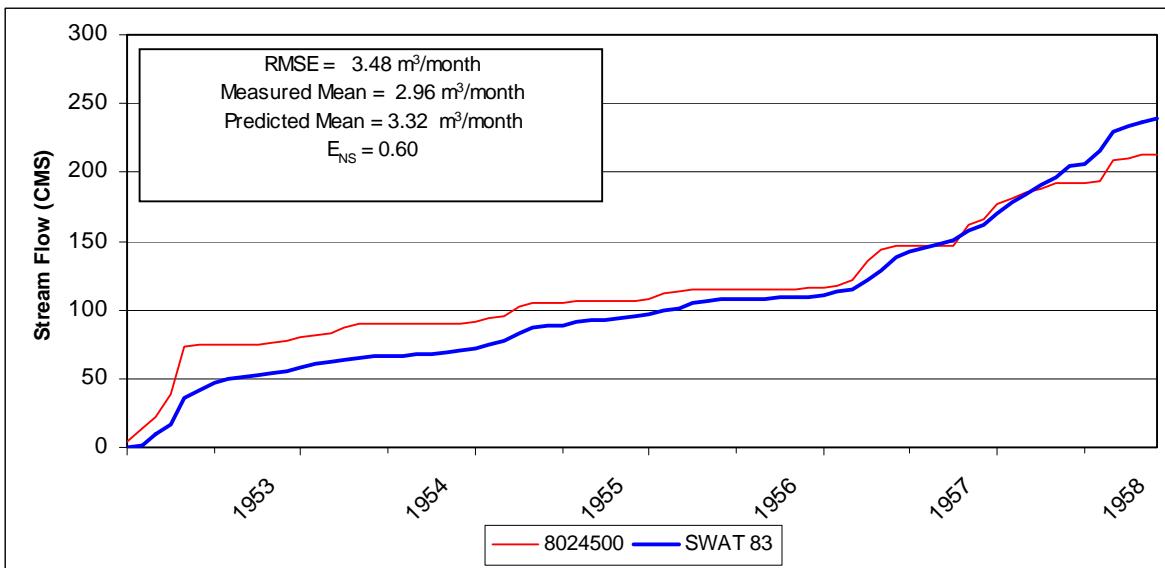


Figure 24. Cumulative monthly measured and predicted stream flow at gage 8024500 (Palo Gaucho Bayou near Hemphill, TX), 1/1/1953 through 12/31/1958. This period was used for flow calibration. Monthly statistics are shown in the box.

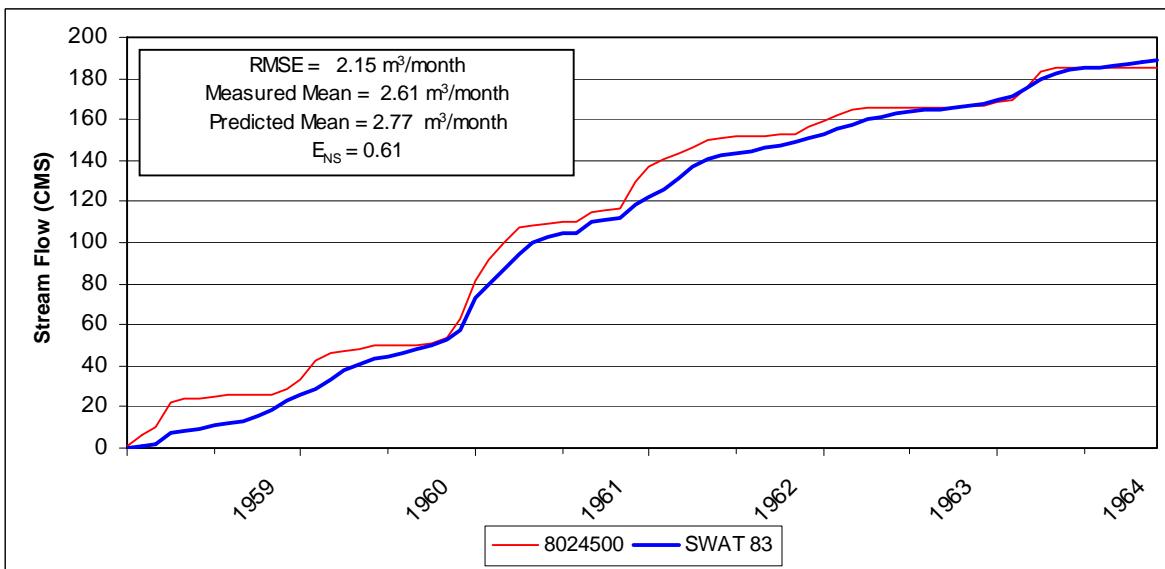


Figure 25. Cumulative monthly measured and predicted stream flow at gage 8024500 (Palo Gaucho Bayou near Hemphill, TX), 1/1/1959 through 12/31/1964. This period was used for flow validation. Monthly statistics are shown in the box.

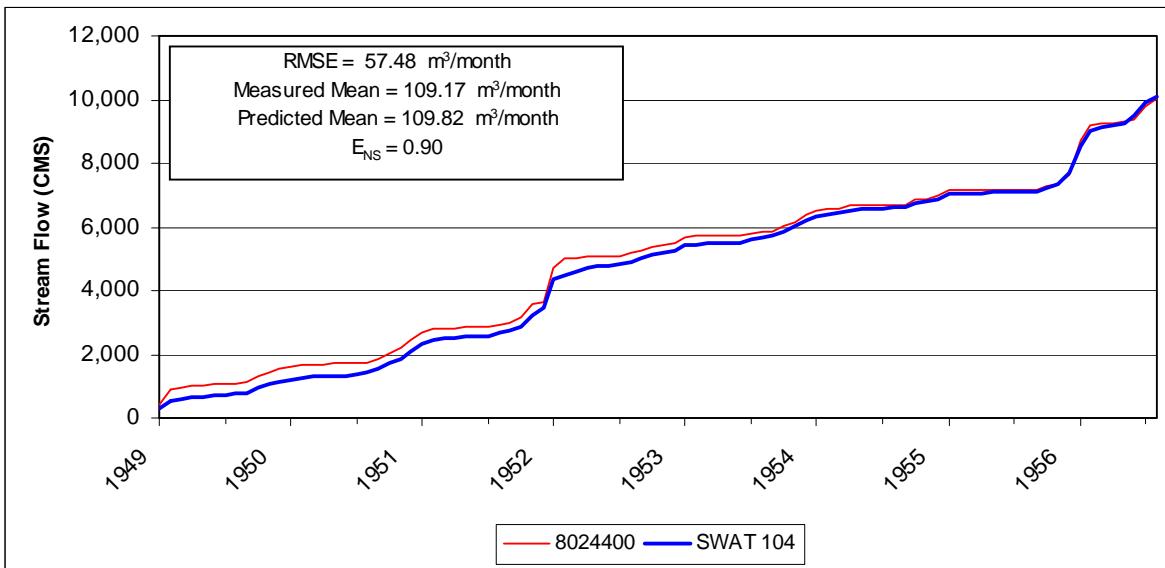


Figure 26. Cumulative monthly measured and predicted stream flow at gage 8024400 (Sabine River near Milam, TX), 1/1/1950 through 12/31/1957. This period was used for flow calibration. Monthly statistics are shown in the box.

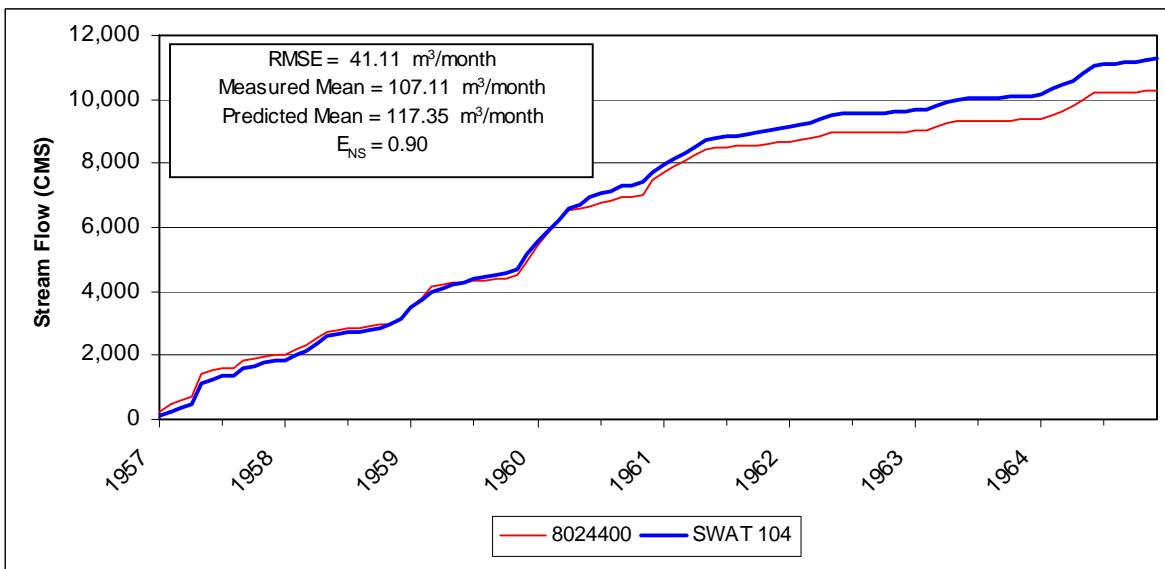


Figure 27. Cumulative monthly measured and predicted stream flow at gage 8024400 (Sabine River near Milam, TX), 1/1/1958 through 12/31/1965. This period was used for flow validation. Monthly statistics are shown in the box.

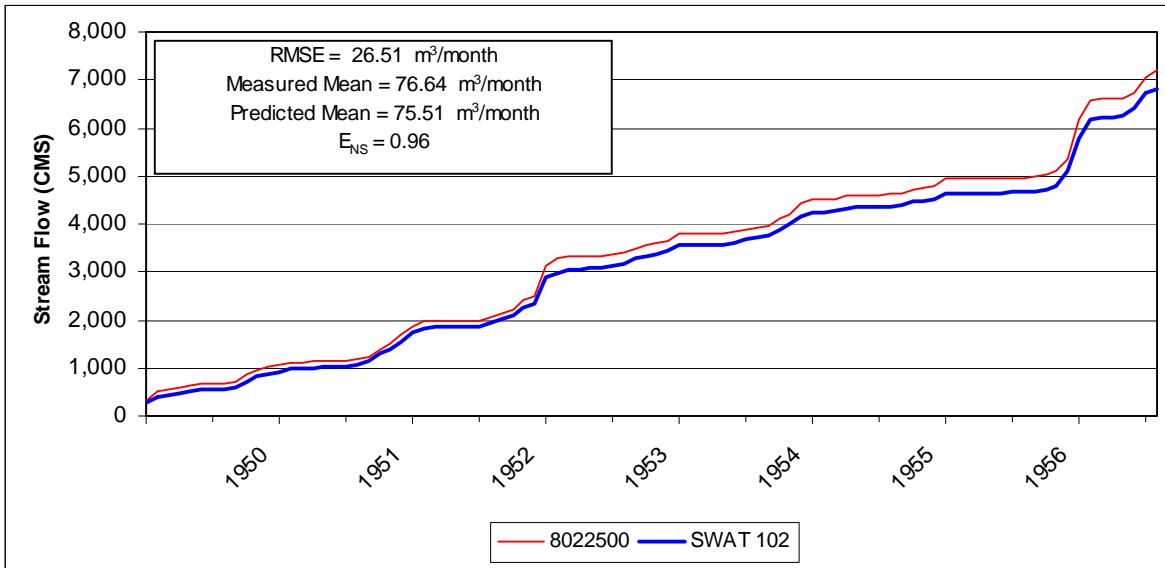


Figure 28. Cumulative monthly measured and predicted stream flow at gage 8022500 (Sabine River near Logansport, LA), 1/1/1950 through 12/31/1957. This period was used for flow calibration. Monthly statistics are shown in the box.

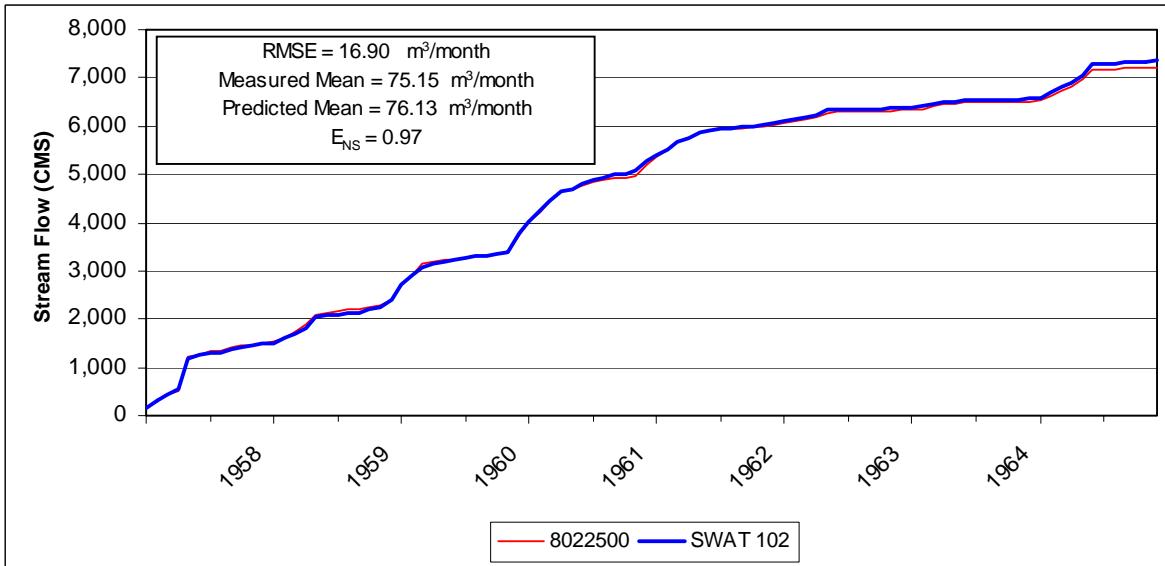


Figure 29. Cumulative monthly measured and predicted stream flow at gage 8022500 (Sabine River near Logansport, LA), 1/1/1958 through 12/31/1965. This period was used for flow validation. Monthly statistics are shown in the box.

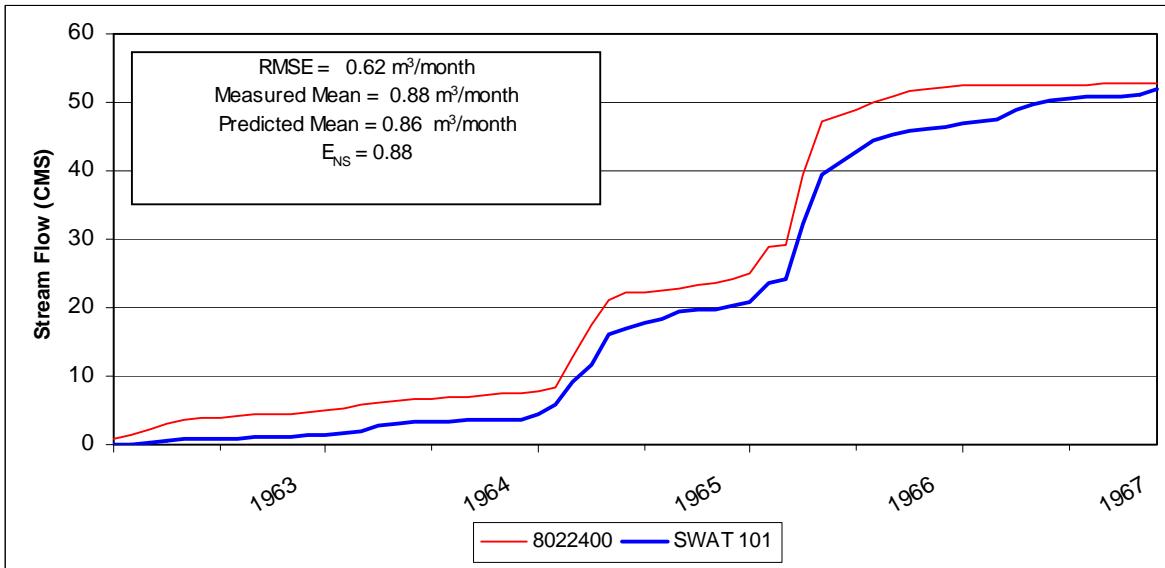


Figure 30. Cumulative monthly measured and predicted stream flow at gage 8022400 (Socagee Creek near Carthage, TX), 1/1/1963 through 12/31/1967. This period was used for flow calibration. Monthly statistics are shown in the box.

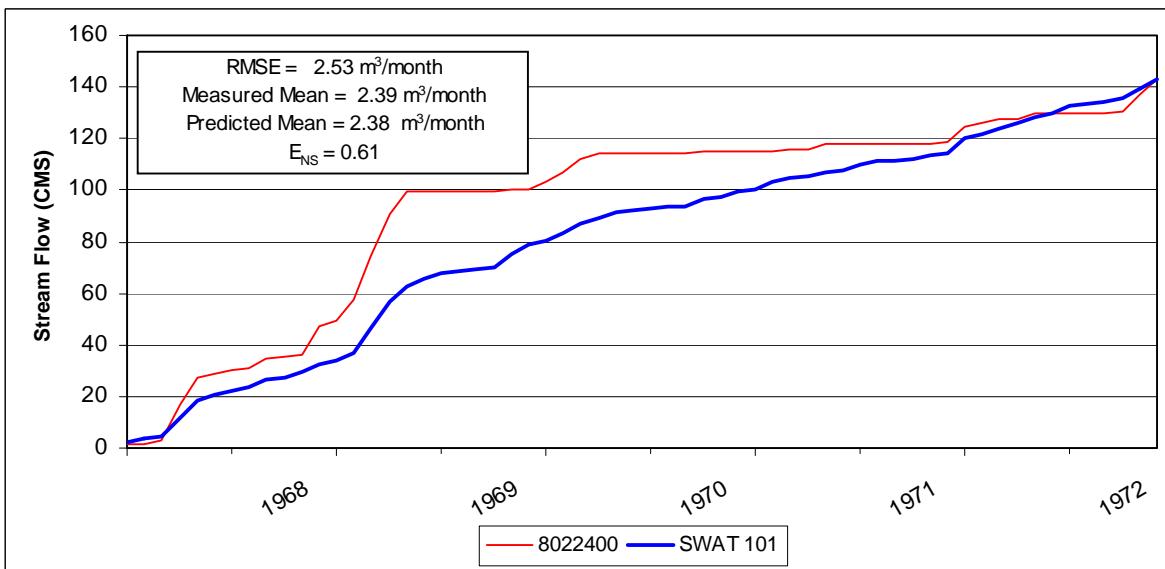


Figure 31. Cumulative monthly measured and predicted stream flow at gage 8022400 (Socagee Creek near Carthage, TX), 1/1/1968 through 12/31/1972. This period was used for flow validation. Monthly statistics are shown in the box.

PART 2: BEST MANAGEMENT PRACTICES

Introduction

The objective of this section of the report is to describe the application of the SWAT model for estimating nutrient loading and sediment yield under the existing conditions of the watershed and analyze the effectiveness of the conservation practices applied under the §319(h) and SB503 programs.

Methodology

BMP Scenarios

Two scenarios were constructed in order to estimate the reductions in nutrients and sediment due to implementation of the WQMPs. Each scenario was run for the 30-year period, 1976 through 2005.

- Scenario I – Current conditions scenario representing the conditions in the watershed prior to the implementation of WQMPs.
- Scenario II – Post BMP scenario representing the conditions in the watershed after the implementation of funded WQMPs under the §319(h) and SB503 programs.

Changes in the nutrient and sediment loadings between the pre-BMP and the post-BMP scenarios provide the percentage of reduction in the watershed.

Scenario I - Existing Conditions

This scenario was modeled using the common manure management and application practices that were followed by farmers prior to WQMP development. All poultry litter and dairy/feedlot manure was applied to pasture and hayland land uses at typical application rates in the subbasin near where it was produced. Cropland was essentially not present in this basin, so no litter/manure applications were made to that land use. The traditional litter/manure practices modeled in scenario I included:

- Litter/manure applications were usually made without regard to soil nutrient levels. A nutrient balance was not developed with recent soil tests. Typical application rates were from 3.5 to 6 tons per acre, often providing much more phosphorous than required by the forage crop.
- Haul distances were short. Fields closer to the production facilities received more litter/manure.
- Soil test phosphorous (STP) was often 250 to 500 PPM or more in these fields receiving heavy litter/manure applications.
- Forages in pastures were typically a mixture of Bahia grass and common Bermuda grass. Hayfield forages were usually Coastal Bermuda or a Tifton hybrid.

- About 30 percent of pastures received a hay cutting each year.
- Timing of litter/manure application was made without regard to forage dormancy. In winter months soils were usually near saturation with little forage growth.
- Lastly, litter/manure applications were often made without adequate untreated buffers around wells, streams and ponds.

Broiler, layer, and pullet production all contribute to the total litter production. Each type of operation produces a different amount and quality of litter. The detailed production data available in the WQMPs in the basin provided the needed information on manure quantities, nutrient content, soil nutrient levels, and spatial locations of fields receiving the waste.

Ponds and lakes affect the hydrology by impounding water and trapping nutrients and sediment. Existing ponds and dams were included in scenario I.

Scenario II - Post BMP Condition

Table 8 shows the various conservation practices (BMPs) by Conservation District that were implemented in the 335 WQMPs in the basin.

Major BMPs simulated with SWAT were:

- Waste utilization
- Nutrient and pest management
- Ponds
- Buffer practices – (field borders, filter strips, riparian forest buffers)
- Pasture and hayland planting
- Prescribed grazing
- Forage harvest management
- Heavy use area protection
- Waste storage facility
- Dead bird disposal methods – (incinerators, freezers, composters)
- Brush management
- Critical area planting
- Fencing
- Forest site preparation

- Forest stand improvement
- Tree/shrub establishment
- Watering facility
- Upland wildlife habitat management

These practices were applied only to the farms in the watershed that had implemented WQMPs under the §319(h) and SB503 programs. As a percentage of the total land area in the watershed these farms constituted a relatively small part – 18,294 ha (45,205 ac) about 2.0 percent.

In scenario I, 79,552 tonnes of manure (61 percent of annual manure production) was applied to the WQMP pasture and hayland fields. This corresponded to an application rate of 7.8 tonnes/ha (3.5 tons/ac) to 11.21 tonnes/ha (5.0 tons/ac). The remaining 51,588 tonnes (39 percent) was applied to pasture and hayland in the subbasin where the manure was produced. Appendix Table 15 provides details on manure applications by subbasin. In some subbasins manure was imported from neighboring subbasins.

In scenario II, 28,751 tonnes of manure (22 percent) was applied to the WQMP pasture and hayland fields, at the application rates specified in the individual WQMPs. The remaining 102,390 tonnes of manure (78 percent) was applied to the pasture and hayland in each subbasin where it was produced. In other words in scenario II, 78 percent of the manure generated in the watershed is disposed of off-farm.

BMP Analysis

Results are presented as a percentage reduction in nutrient and sediment loadings at three levels:

- Farm level – This included only the areas in each subbasin where BMPs were applied.
- Subbasin level – Included both the BMP areas and the non-BMP areas within the subbasin.
- Watershed level – Four locations were selected along the main channels. These were: (1) the outlet of subbasin 43 on Flat Fork Creek; (2) the outlet of subbasin 102 on the Sabine River; (3) the outlet of subbasin 103 on Tenaha Creek; and (4) the outlet of subbasin 105 on the Sabine River at the outlet for the entire watershed. Refer to the subbasin map in Figure 1 for subbasin locations.

Results and Discussion

The simulation of the watershed hydrology can be separated into two major divisions. The first part is the land phase of the hydrologic cycle that controls the amount of water, sediment, and nutrient loadings to the main channel in each subbasin. The second part is the routing phase, or water phase, of the hydrologic cycle where water, sediment, and nutrients move through the channel network of the watershed to the outlet.

The following results described under the farm and subbasin levels are from the land phase, while the watershed results are from the routing phase of the simulation.

Reductions at farm level

The subbasins containing §319(h) and SB503-funded conservation practices are shown in Figures 7, while the types of installed practices and extents are listed in Table 8. The reductions in nutrient loadings are shown in Figure 32 and 33. Sediment reduction loadings are shown in Figure 34. These include only the areas where conservation practices were implemented.

Phosphorous reductions varied from 64 to 84 percent at the farm level across the subbasins.

Nitrogen reductions varied from 30 to 79 percent.

Sediment reductions varied from 65 to 74 percent at the farm level.

Reductions at the subbasin level - Phosphorous

Reductions in subbasin phosphorous loadings are shown in Figure 35. Here all the land in the subbasin is considered.

The percentage reductions varied from 0 to 75 percent. Compared to the reductions at the farm level, for each subbasin the percentage reductions are less, as expected, as the BMP treated land comprises a relatively small part of the total subbasin.

Reductions at the subbasin level – Nitrogen

Reductions in subbasin nitrogen loadings are shown in Figure 36.

The percentage reductions varied from 0 to 39 percent.

Reductions at the subbasin level – sediment

Reductions in subbasin sediment loadings are shown in Figure 37.

The percentage reductions varied from 0 to 20 percent. Subbasins that show little reduction in sediment have BMP practices, such as farm ponds that impact limited areas.

Reductions at the watershed level – Phosphorous

Figure 38 shows the percentage phosphorous loading reductions at four locations on the main channels. See the subbasin map in Figure 1 for the location of the subbasins.

The percentage reductions varied from 9.3 in subbasin 102 to 29.0 in subbasin 103. The percentage reduction at the watershed outlet in subbasin 105 was 14.0.

Reductions at the watershed level – Nitrogen

Figure 38 shows the percentage nitrogen loading reductions at the same four locations on the main channels.

The percentage reductions varied from 2.0 in subbasin 102 to 14.3 in subbasin 103. The percentage reduction at the watershed outlet in subbasin 105 was 2.9.

Reductions at the watershed level – sediment

Figure 38 shows the percentage sediment loading reductions at the same four locations.

The percentage reductions varied from 0.1 at the outlet of subbasin 102 to 8.7 at the outlet of subbasin 103. At the watershed outlet in subbasin 105, the percentage reduction was 0.1.

A closer look at a sub watershed area with concentrated poultry production

The sub watershed area consisting of subbasin 103 and contributing subbasins 57 and 58, serves as an example of what can be accomplished through planning and application of WQMPs. The outlet of subbasin 103 is at the highway 87 bridge over Tenaha creek near the town of Shelbyville, TX. This sub watershed area consists of 25,319 ha. (62,564 ac) including 36 WQMPs with 2,304 ha. (5,693 ac), or 9.1 percent of the land area in the sub watershed. The 36 WQMPs in this area include 208 fields with an average field size of 11.1 ha (27.4 ac). Manure production totals 23,959 tonnes annually.

After implementation of the conservation practices in the WQMPs the reductions in watershed level predicted phosphorous, nitrogen, and sediment were 29.1, 14.3, and 8.7 percent, respectively, a very significant improvement.

Spatial view of nutrient and sediment loadings

Symbolized subbasin maps in Figures 39 and 40 present the predicted average annual phosphorous loadings by subbasin for the current condition and scenario II, 1976 through 2005.

Similar maps in Figures 41 and 42 present the predicted average annual nitrogen loadings by subbasin for the current conditions and scenario II, 1976 through 2005.

Lastly, predicted sediment loadings are shown in Figures 43 and 44 for both scenarios.

Conclusions

The purpose of this study was to simulate the nutrient and sediment loadings for two scenarios: (I) current conditions prior to the development and application of WQMPs, (II) §319(h) and SB503 BMP applications through 335 WQMPs. The study was performed using the SWAT basin scale model.

Scenario II showed that BMPs at the farm level where they were implemented reduced phosphorous loadings from 64 to 84 percent. Nitrogen loadings were reduced from 30 to 79 percent and sediment loadings from 65 to 74 percent.

Scenario II showed that BMPs at the subbasin level reduced phosphorous loadings from 0 to 75 percent. Nitrogen loadings were reduced from 0 to 39 percent, and sediment loadings were reduced from less than 0 to 20 percent.

Scenario II showed that BMPs at the watershed level at the outlet of the Toledo Bend Reservoir Watershed (subbasin 105), reduced phosphorous, nitrogen, and sediment loadings by 14.0, 2.9, and 0.1 percent, respectively.

Major BMPs simulated with SWAT were waste utilization, nutrient and pest management, ponds, buffer practices (field borders, filter strips, riparian forest buffers), pasture and hayland planting, prescribed grazing, forage harvest management, heavy use area protection, waste storage facility, brush management, critical area planting, fencing, forest site preparation, firebreaks, tree establishment, and upland wildlife habitat management.

Table 8. Locations and types of conservation practices (BMPs) implemented under the §319(h) and SB503 projects.

<i>Conservation Practice</i>	<i>Harrison Co. SWCD 412</i>	<i>Pineywoods SWCD 429</i>	<i>Rusk SWCD 447</i>	<i>Panola SWCD 448</i>	<i>Shelby SWCD 449</i>	<i>Grand Total</i>
313 - Waste Storage Facility (no)	0	0	1	15	55	71
314 - Brush Management (ha)	0	0	0	39	2	41
316 - Animal Mortality Facility (no)	0	9	0	55	222	286
317 - Composting Facility (no)	0	7	0	2	34	43
327 - Conservation Cover (ha)	0	0	0	10	29	39
328 - Conservation Crop Rotation (ha)	0	0	0	0	3	3
329 - Residue Management (ha)	0	0	0	0	3	3
342 - Critical Area Planting (ha)	0	0	6	5	0	11
378 - Pond (no)	1	0	0	17	1	19
382 - Fencing (m)	1,509	0	1,445	29,186	5,573	37,714
386 - Field Border (m)	0	287	1,920	0	22,697	24,905
391 - Riparian Forest Buffer (ha)	0	74	15	0	78	167
393 – Filter Strip (m)	0	149	998	84	486	1,717
397 - Aquaculture Ponds (ha)	0	0	2	0	0	2
398 - Fish Raceway (m)	0	0	274	0	0	274
460 - Land Clearing (ha)	25	69	0	0	19	114
472 - Use Exclusion (ha)	0	0	0	0	1	1
490 - Forest Site Preparation (ha)	0	0	0	3	0	3
511 - Forage Harvest Mgt. (ha)	5	195	147	814	1,496	2,658
512 - Pasture & Hay Planting (ha)	31	138	58	280	293	800
516 - Pipeline (m)	0	0	0	1,372	0	1,372
521 - Pond Lining (no)	0	1	0	0	0	1
528 - Prescribed Grazing (ha)	25	963	183	3,745	6,528	11,444
533 - Pumping Plant (no)	0	0	1	0	0	1
561 - Heavy Use Area Prot. (ha)	0	171	21	354	1,314	1,860

(table continued on next page)

Table 8 – continued.

Conservation Practice	<i>Harrison Co. SWCD 412</i>	<i>Pineywoods SWCD 429</i>	<i>Rusk SWCD 447</i>	<i>Panola SWCD 448</i>	<i>Shelby SWCD 449</i>	Grand Total
562 - Recreation Area Imp. (ha)	0	0	0	0	52	52
574 - Spring Development (no)	0	0	0	0	1	1
575 - Animal Trails and Walkways (m)	0	0	0	0	15	15
590 - Nutrient Management (ha)	31	1,190	217	3,925	6,673	12,036
595 - Pest Management (ha)	31	1,219	221	4,219	8,466	14,156
612 - Tree/Shrub Establishment (ha)	0	0	0	18	0	18
614 - Watering Facility (no)	0	0	0	2	1	3
633 - Waste Utilization (ha)	0	1,108	138	1,592	5,955	8,793
642 - Water Well (no)	0	0	0	2	0	2
644 - Wetland Wildlife Hab. Mgt. (ha)	0	0	4	15	0	19
645 - Upland Wildlife Hab. Mgt. (ha)	11	0	89	245	1,972	2,318
648 - Wildlife Watering facility (no)	1	0	0	1	0	2
657 - Wetland Restoration (ha)	0	0	0	59	0	59
666 - Forest Stand Improvement (ha)	0	66	82	1,666	183	1,996
Freezer Unit (no)	0	3	0	49	155	207
Incinerator (no)	0	0	0	4	47	51
Waste Dist. System - Pipe (m)	0	0	670	0	0	670
Waste Dist. System - Sprinkler (no)	0	0	1	0	0	1

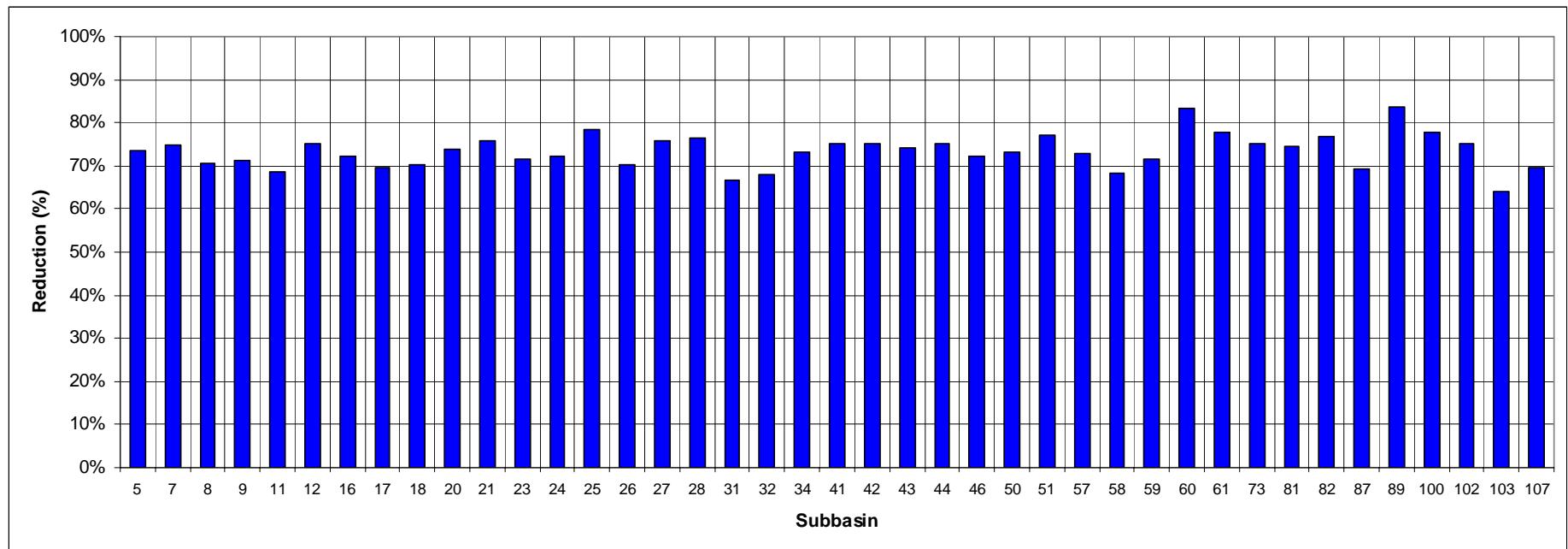


Figure 32. Percentage reductions in total phosphorous at the farm level where conservation practices were implemented. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

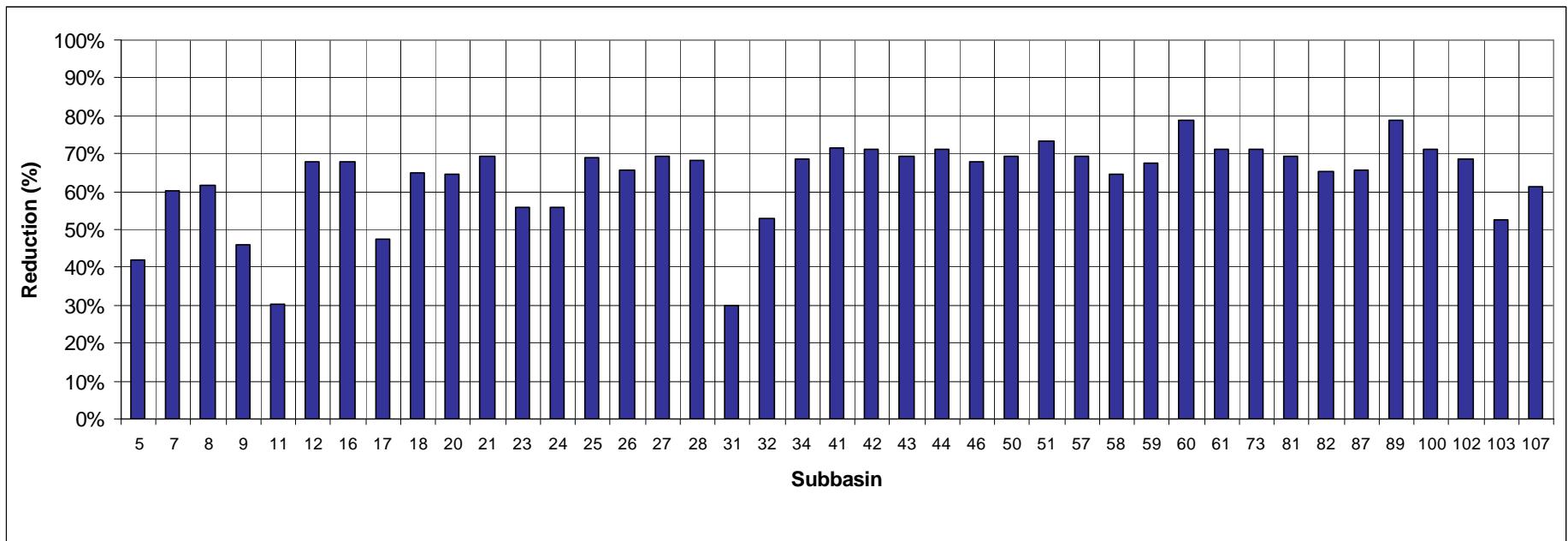


Figure 33. Percentage reductions in total nitrogen loading at the farm level where conservation practices were implemented. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

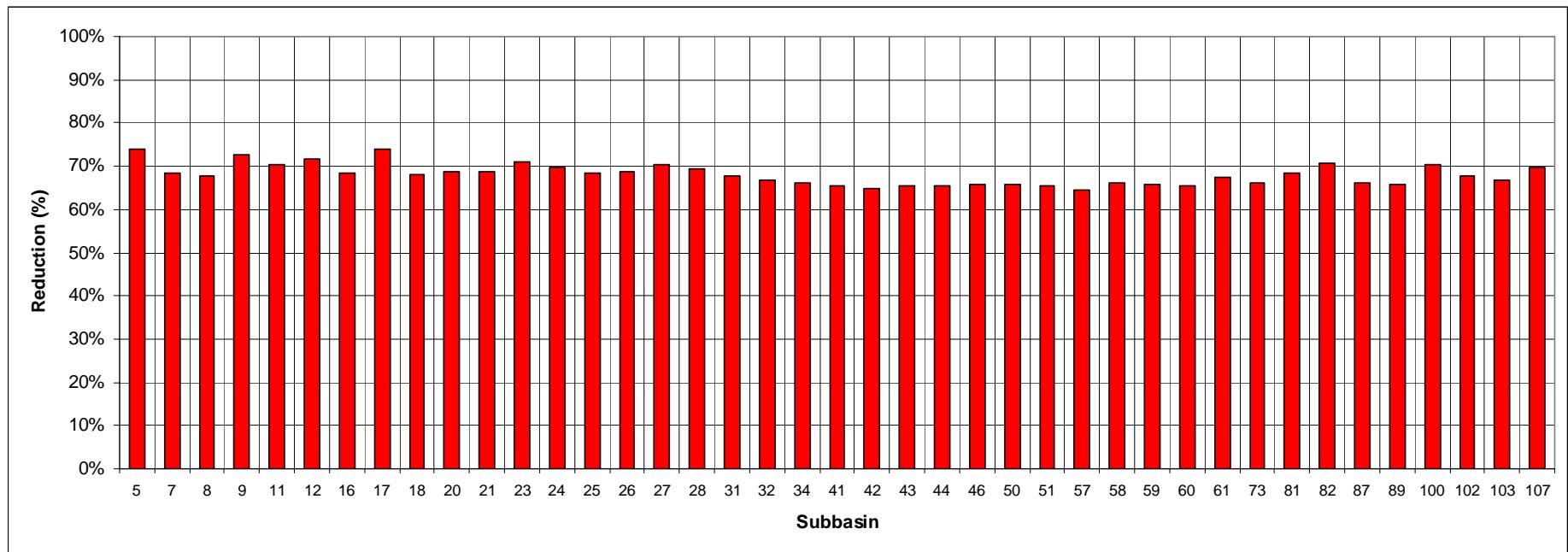


Figure 34. Percentage reductions in the sediment loadings at the farm level where conservation practices were implemented. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

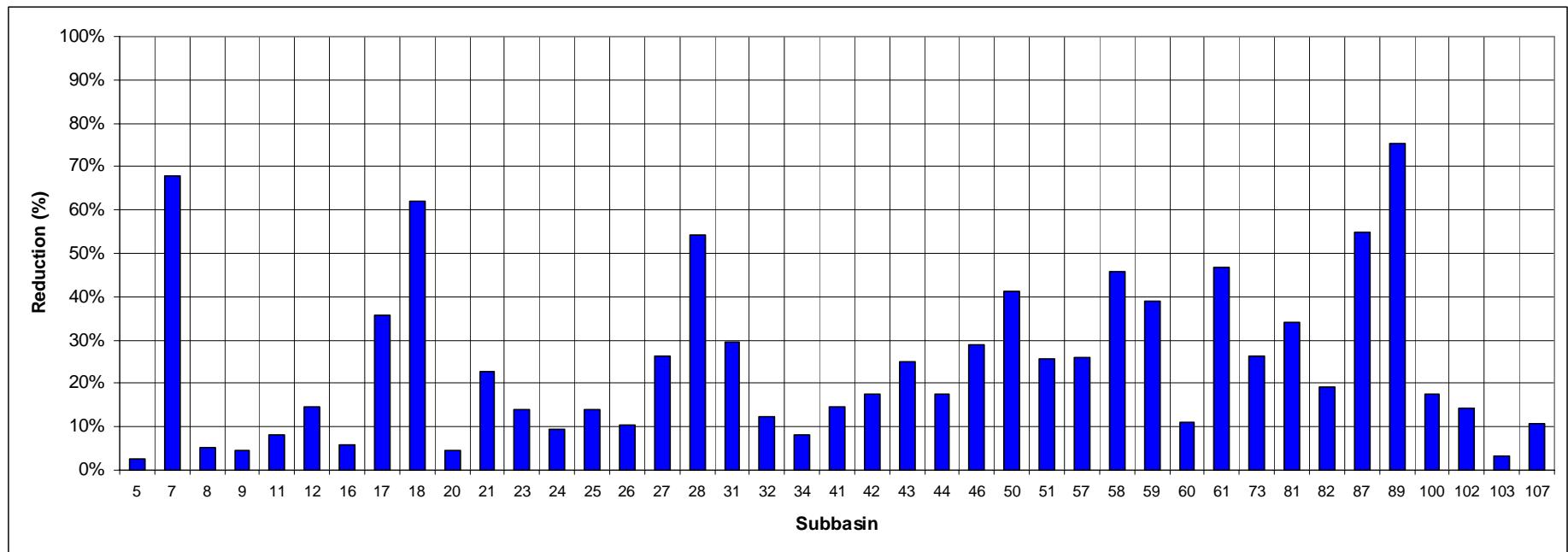


Figure 35. Percentage reductions in total phosphorous loadings at the subbasin level. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

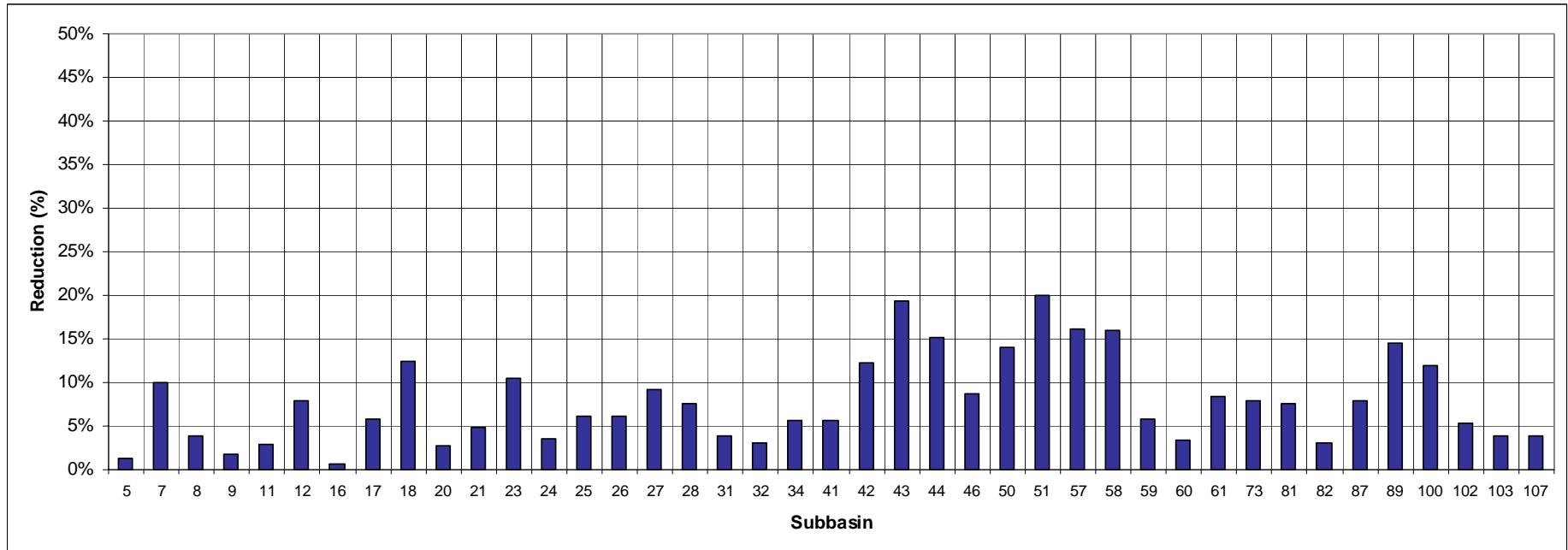


Figure 36. Percentage reductions in total nitrogen loadings at the subbasin level. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

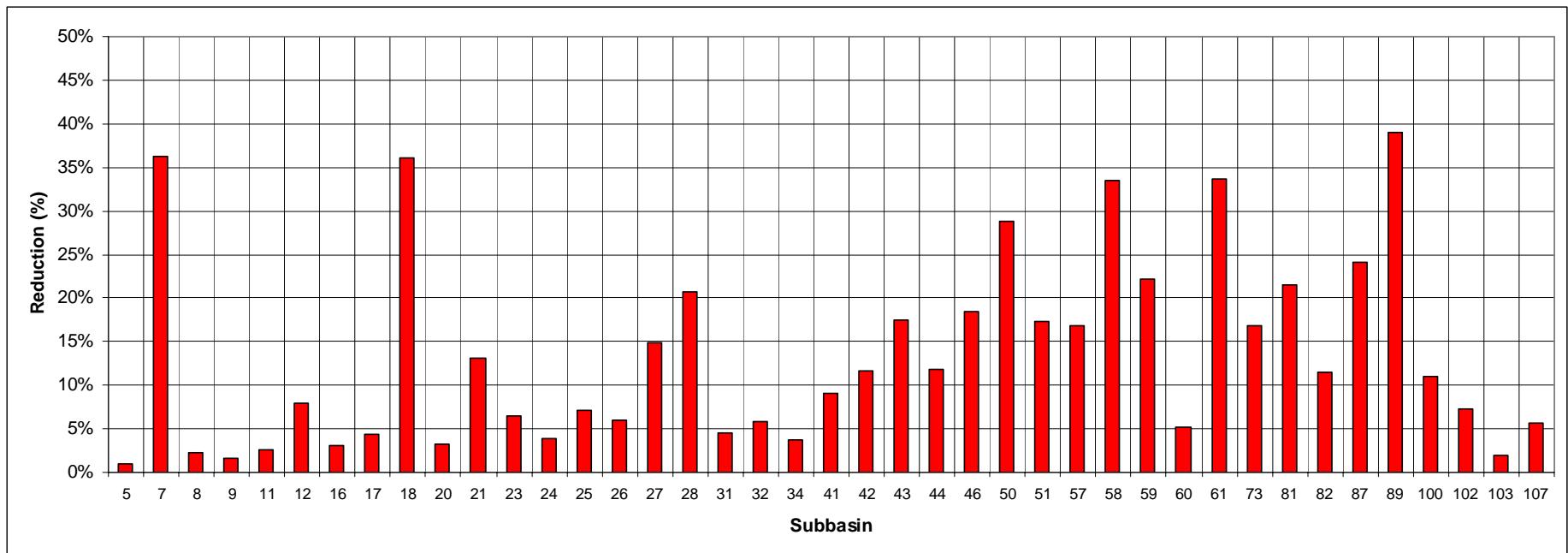


Figure 37. Percentage reductions in sediment loadings at the subbasin level. The subbasins shown in this figure are those that contained conservation practices implemented under the §319(h) and SB503 projects.

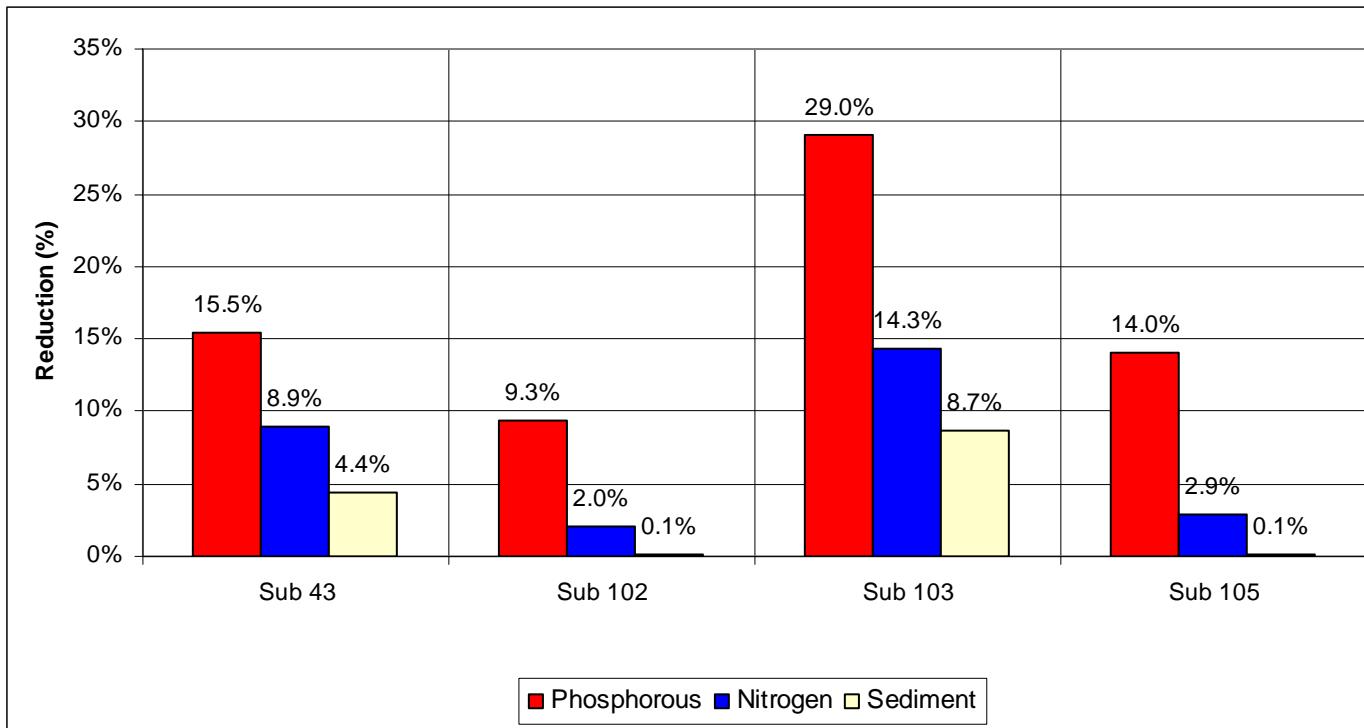


Figure 38. Percentage reductions in phosphorous, nitrogen and sediment loadings at four locations on the main channels, Toledo Bend Watershed. Subbasin 105 is the outlet for the watershed.

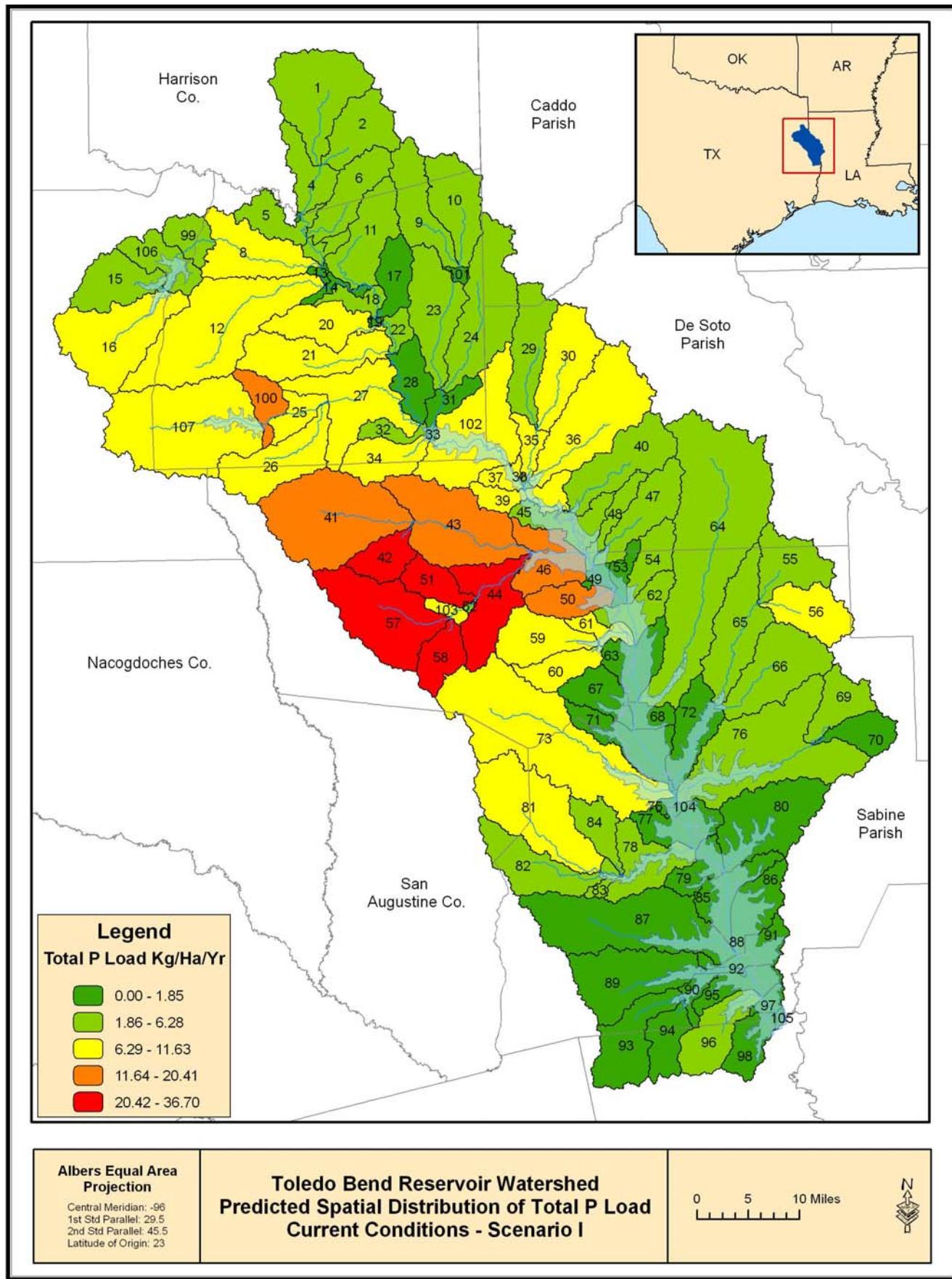


Figure 39. Predicted spatial distribution of total phosphorous load by subbasin for current condition, Toledo Bend watershed, 1976 through 2005.

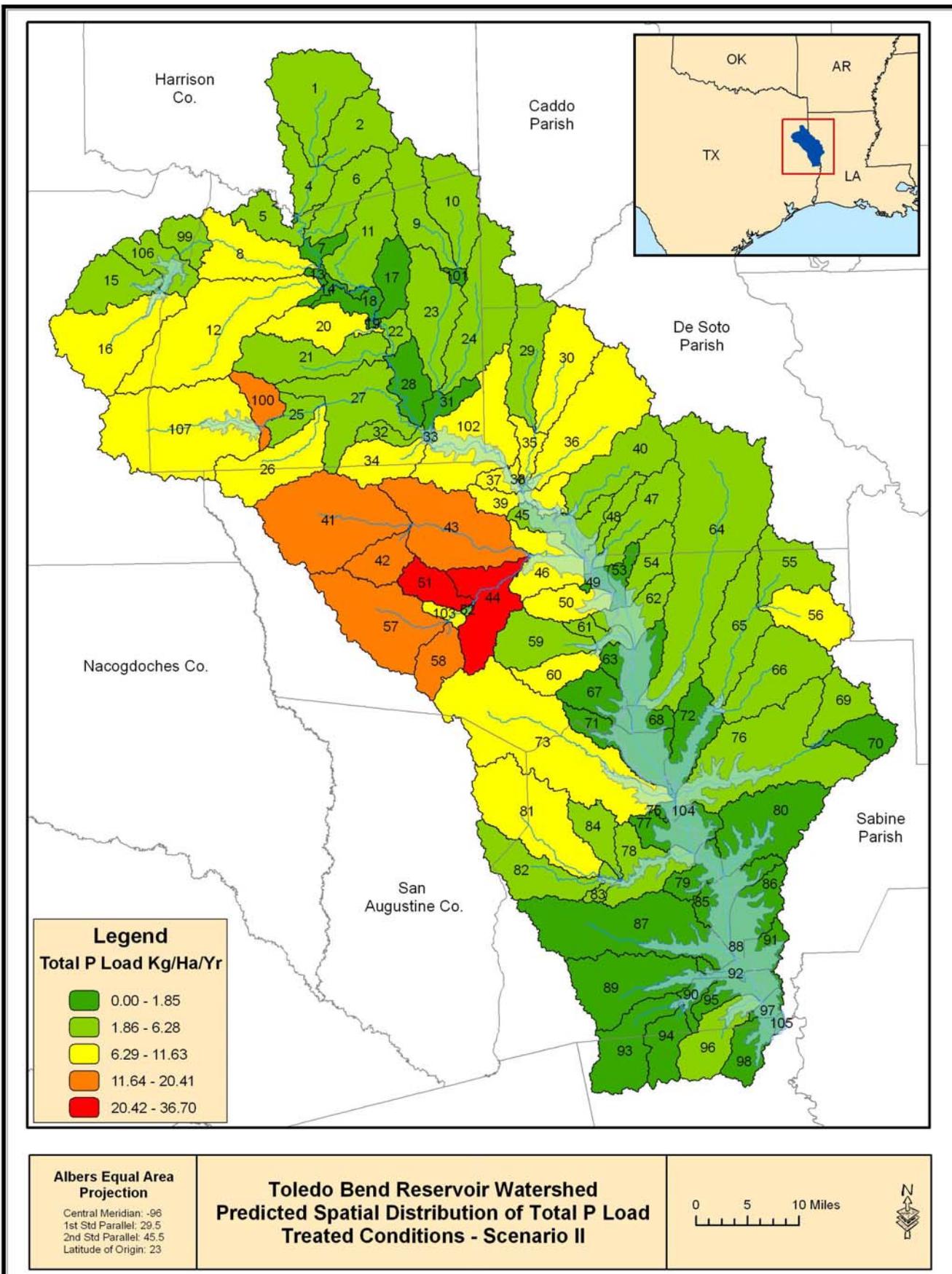


Figure 40. Predicted spatial distribution of total phosphorous by subbasin after conservation practice implementation (scenario II), Toledo Bend watershed, 1976 through 2005.

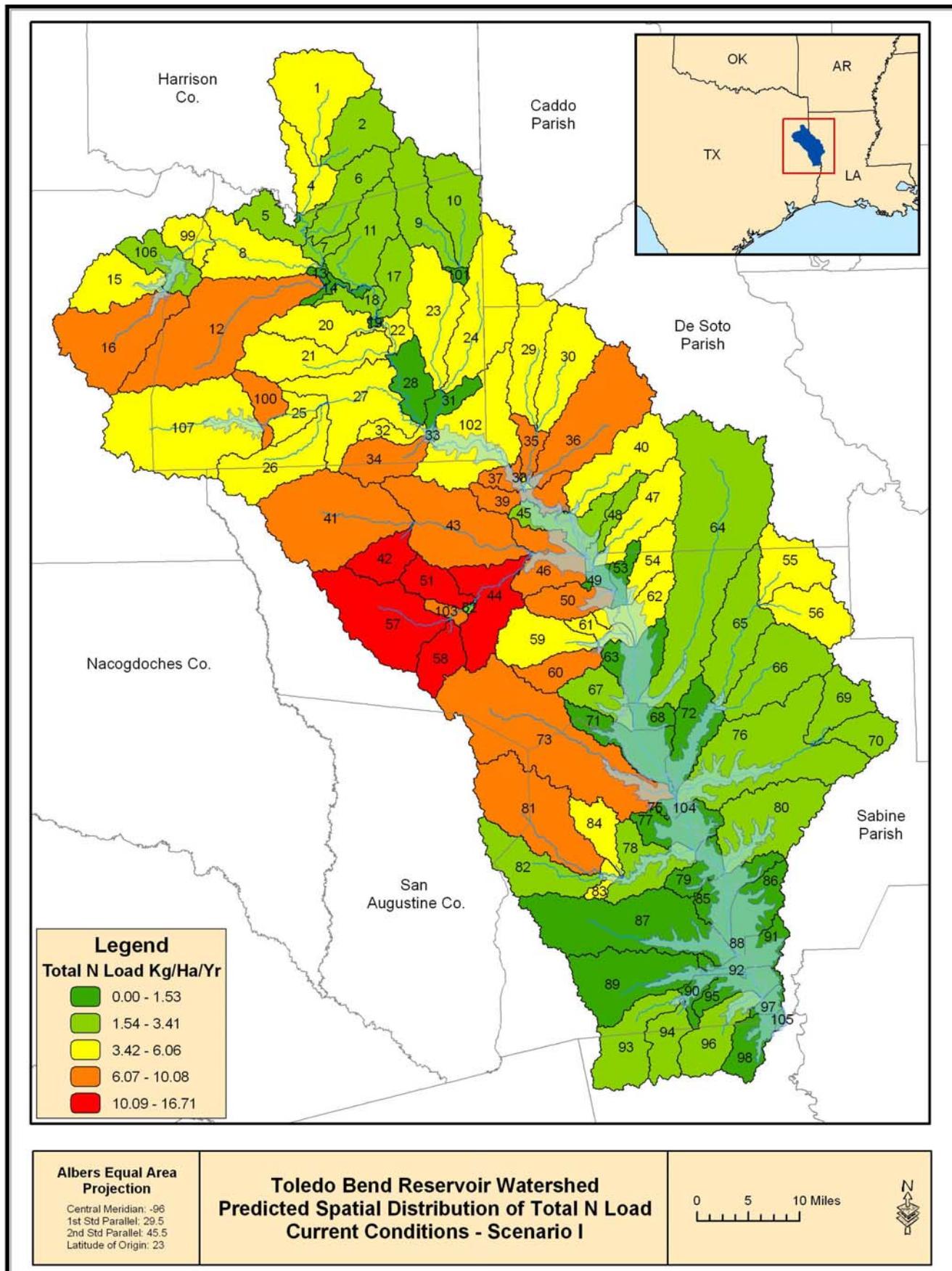


Figure 41. Predicted spatial distribution of total nitrogen load by subbasin for current condition, Toledo Bend watershed, 1976 through 2005.

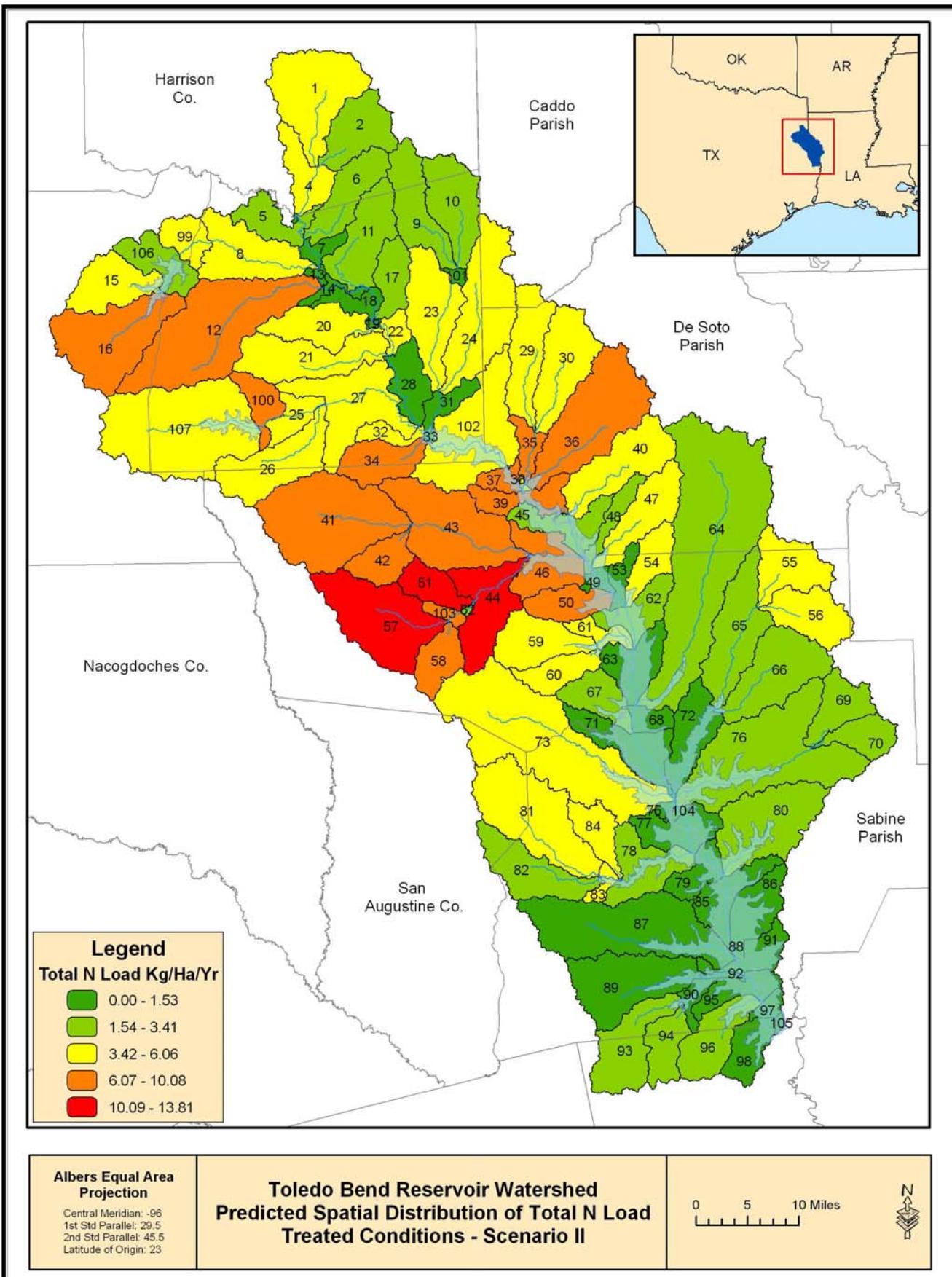


Figure 42. Predicted spatial distribution of total nitrogen by subbasin after conservation practice implementation (scenario II), Toledo Bend watershed, 1976 through 2005.

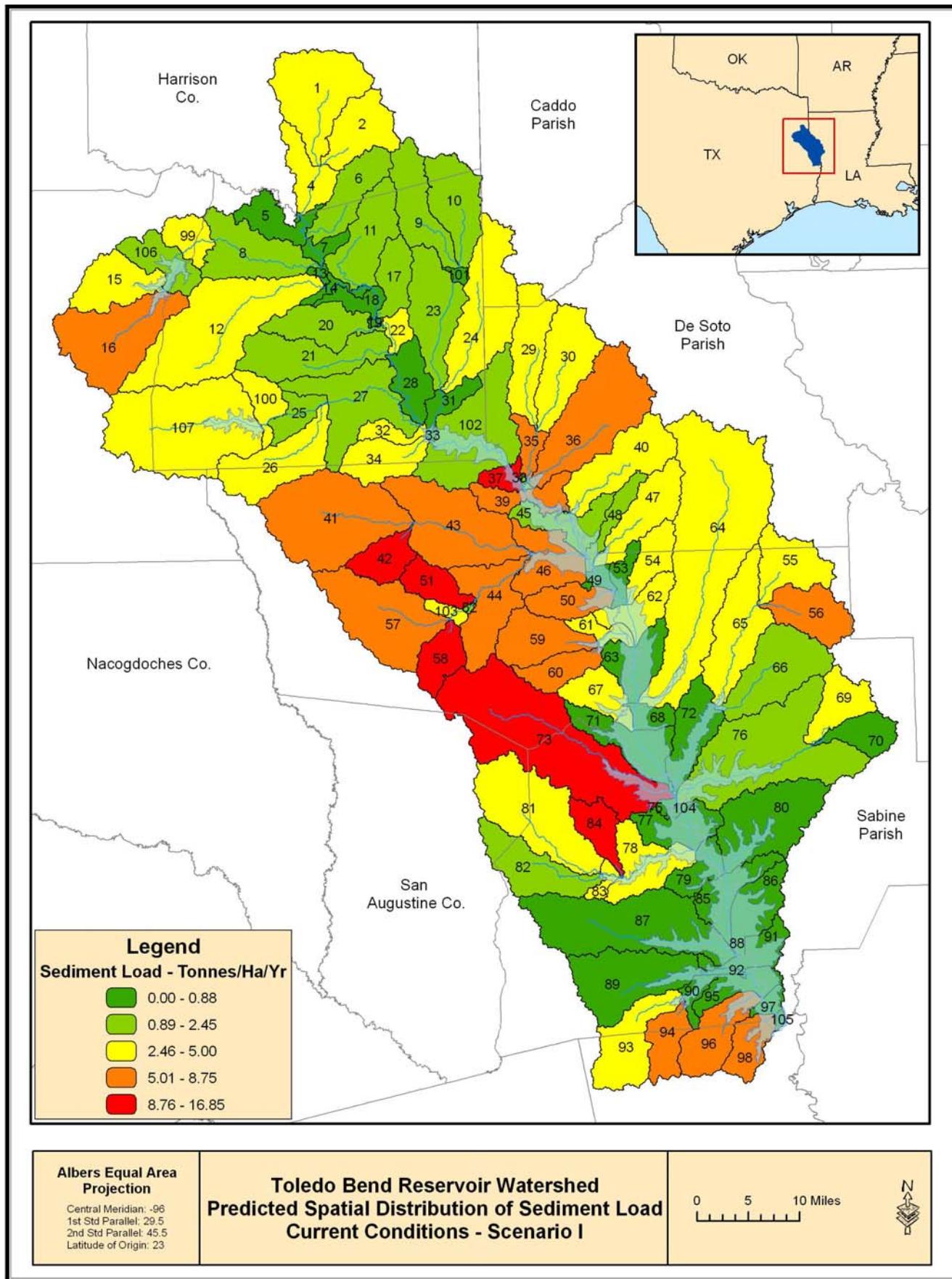


Figure 43. Predicted spatial distribution of sediment load by subbasin for current condition, Toledo Bend watershed, 1976 through 2005.

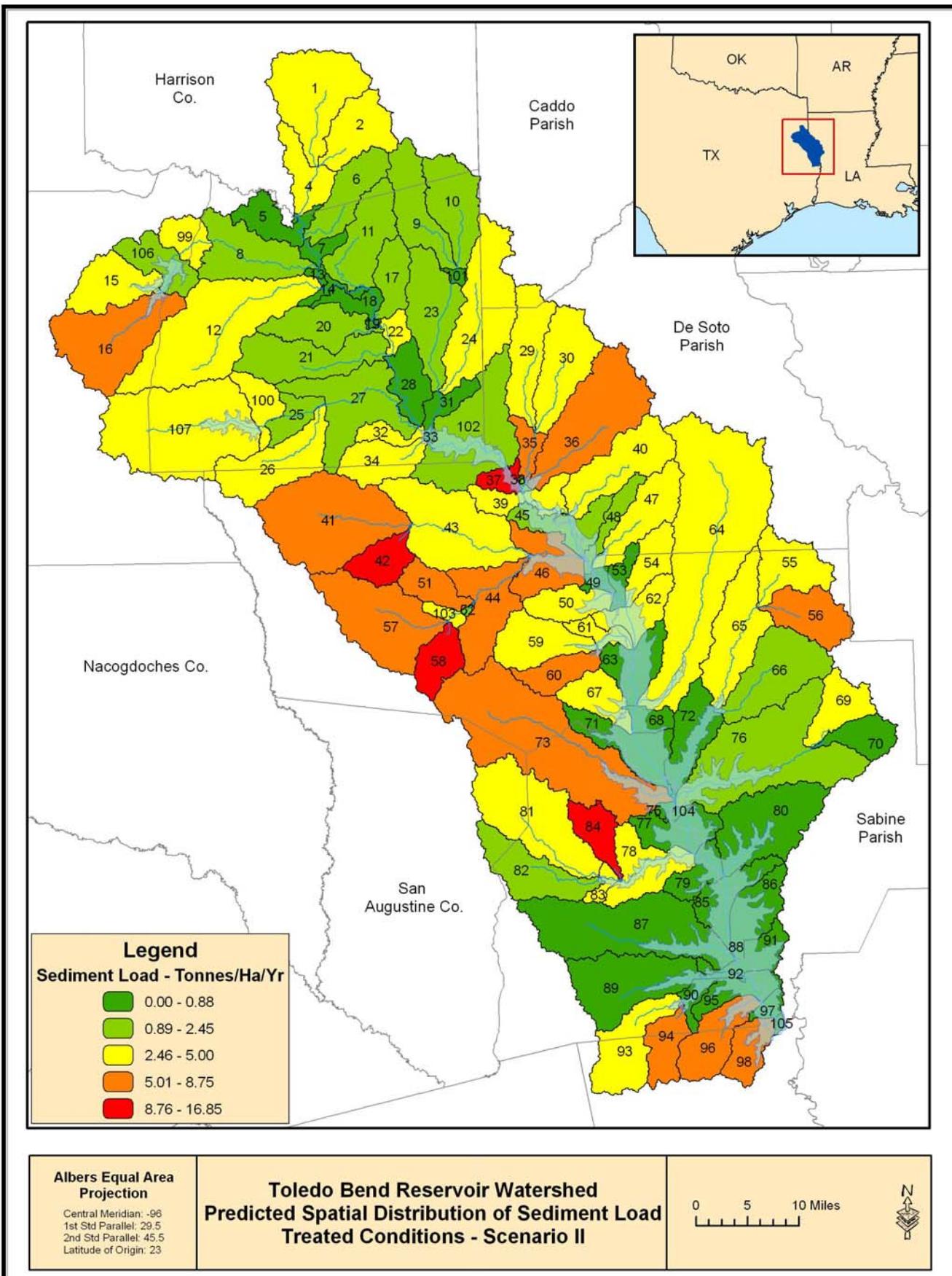


Figure 44. Predicted spatial distribution of sediment load by subbasin after conservation practice implementation (scenario II), Toledo Bend watershed, 1976 through 2005.

APPENDIX

Notes for Table 9 – Appendix

In Table 9, the fraction of landuse in each subbasin is based on actual input into SWAT and will not agree exactly with landuse percentages in Table 2. We set the landuse filter in SWAT at 7 percent, which means that any landuse comprising less than 7 percent of a subbasin was ignored in the model input. In addition, SWAT re-allocates areas to the other landuses when a landuse of less than 7 percent is ignored and dropped out of the model. The result is usually a small adjustment in area for each category of landuse in SWAT input.

Table 9. Land use/cover by subbasin, Toledo Bend Reservoir Watershed

Detailed LANDUSE/SOIL distribution

SWAT model class

Mon Dec 13 17:13:34 2007

	Area [ha]	Area [acres]	
Watershed	935458.8521	2311565.5965	
			Area [ha] Area [acres] %Wat.Area
LANDUSE			
Residential-High Density --> URHD	624.5848	1543.3803	0.07
SR319 - Poultry Headquarters --> TBHQ	1801.1512	4450.7346	0.19
Range-Brush --> RNGB	87766.4598	216875.3105	9.38
Pasture --> PAST	136842.1880	338143.8888	14.63
TPLH, SR319 Pastureland --> TPLH	894.7847	2211.0578	0.10
Range-Grasses --> RNGE	1119.0736	2765.2867	0.12
Water --> WATR	63401.0184	156667.0864	6.78
Wetlands-Forested --> WETF	164225.4188	405809.2211	17.56
TPLM, SR319 Pasture --> TPLM	141.1543	348.7992	0.02
SR319 Pasture, no litter --> TBPA	3563.2129	8804.8772	0.38
Wetlands-Mixed --> WETL	10888.2645	26905.4459	1.16
TPMH, SR319 Pasture --> TPMH	977.8673	2416.3589	0.10
TPML, SR319 Pasture --> TPML	14.1527	34.9721	0.00
TPMM, SR319 Pasture --> TPMM	1331.1349	3289.3010	0.14
TPSS, SR319 Pasture --> TPSS	1345.7806	3325.4911	0.14
TPMV, SR319 Pasture --> TPMV	598.4044	1478.6871	0.06
TPHH, SR319 Pasture --> TPHH	870.7006	2151.5448	0.09
Forest-Deciduous --> FRSD	33117.2158	81834.2961	3.54
Forest-Evergreen --> FRSE	277946.8516	686820.5677	29.71
TPHM, SR319 Pasture --> TPHM	906.1696	2239.1904	0.10
TPHV, SR319 Pasture --> TPHV	190.1549	469.8823	0.02
Forest-Mixed --> FRST	99040.5309	244734.1038	10.59
TPVH, SR319 Pasture --> TPVH	601.8745	1487.2619	0.06
Residential-Low Density --> URLD	42998.3670	106251.1148	4.60
TPVL, SR319 Pasture --> TPVL	7.9078	19.5405	0.00
TPVM, SR319 Pasture --> TPVM	891.5321	2203.0205	0.10
Agricultural Land-Row Crops --> AGRR	968.9656	2394.3625	0.10
TPVV, SR319 Pasture --> TPVV	81.9094	202.4022	0.01
Residential-Medium Density --> URMD	1666.7478	4118.6171	0.18
SR 319 Hayland - no litter --> TBHA	416.7297	1029.7600	0.04

Table 9-1

SR Grass Establishment --> TBAP	218.5440	540.0331	0.02
SOIL			
MOOREVILLE	373.2362	922.2854	0.04
GRAPELAND	138.5915	342.4666	0.01
Betis	1780.6246	4400.0123	0.19
Redsprings	987.8264	2440.9685	0.11
Bowie	37082.2254	91632.0330	3.96
Keithville	21217.1266	52428.5806	2.27
RAYBURN	3284.3387	8115.7652	0.35
STRINGTOWN	10.2774	25.3959	0.00
Kolin	6.0821	15.0291	0.00
Maben	24800.3214	61282.8343	2.65
DARDEN	7.4332	18.3677	0.00
NEWCO	30.5950	75.6018	0.00
BROWNDELL	203.5714	503.0352	0.02
Dreka	10514.9546	25982.9785	1.12
AUSTONIO	1123.6593	2776.6182	0.12
Tenaha	7854.2275	19408.1889	0.84
NIKFUL	229.8974	568.0879	0.02
Lilbert	12881.5984	31831.0736	1.38
EASTWOOD	62467.3263	154359.8867	6.68
Pirkey	56.4645	139.5266	0.01
Yorktown	5.6935	14.0690	0.00
ERNO	323.0648	798.3093	0.03
Flo	6.1668	15.2384	0.00
Larue	1063.9554	2629.0870	0.11
Woodtell	4593.4931	11350.7512	0.49
Derly	29.4882	72.8668	0.00
SAWYER	36.9286	91.2525	0.00
NACOGDOCHES	20.1664	49.8321	0.00
PICKTON	8.9327	22.0732	0.00
Mattex	56.6892	140.0818	0.01
METCALF	39603.6196	97862.5241	4.23
HAINESVILLE	296.2862	732.1381	0.03
GALLIME	1509.7006	3730.5457	0.16
Guyton	16061.3446	39688.3857	1.72
KIRBYVILLE	16.3648	40.4382	0.00
Sacul	144193.6709	356309.7705	15.41
RUSTON	2636.0437	6513.7958	0.28
Cahaba	2766.8250	6836.9628	0.30
Miscellaneous	10.0434	24.8178	0.00
Bienville	662.5254	1637.1334	0.07

Table 9-2

CORRIGAN	551.8170	1363.5673	0.06
Briley	1218.6794	3011.4177	0.13
Iuka	9400.5671	23229.2713	1.00
REDCO	2.1345	5.2745	0.00
Dams	27.3584	67.6039	0.00
SCOTTSVILLE	15746.4386	38910.2370	1.68
Naconiche	405.3289	1001.5880	0.04
Latch	4577.6274	11311.5461	0.49
Water	23227.0430	57395.1846	2.48
Pits	238.3110	588.8785	0.03
Darco	45268.5143	111860.7623	4.84
Nahatche	15136.1464	37402.1746	1.62
ALAZAN	2336.8219	5774.4037	0.25
Owentown	2422.0051	5984.8956	0.26
Meth	10631.9621	26272.1099	1.14
OSIER	1371.5364	3389.1349	0.15
DARBONNE	97.2639	240.3438	0.01
WOLFPEN	676.4088	1671.4400	0.07
Hannahatchee	39.7782	98.2940	0.00
Iulus	1005.9528	2485.7596	0.11
Elrose	1174.4713	2902.1773	0.13
Bernaldo	24763.3724	61191.5314	2.65
BESNER	561.6316	1387.8198	0.06
Woden	36.5342	90.2778	0.00
Marietta	4708.7772	11635.6239	0.50
LETNEY	4133.1788	10213.2915	0.44
Tonkawa	24592.6566	60769.6841	2.63
Cuthbert	38902.0391	96128.8837	4.16
Cart	30011.1855	74159.1399	3.21
Beauregard	1952.3287	4824.3018	0.21
BIBB	38.9569	96.2644	0.00
Laneville	20503.1483	50664.3046	2.19
KISATCHIE	2529.8225	6251.3178	0.27
ALTO	152.8529	377.7071	0.02
Elysian	1214.2914	3000.5747	0.13
Kullit	25087.9127	61993.4868	2.68
TAHOULA	32.3343	79.8996	0.00
TRAWICK	8290.8089	20487.0033	0.89
Gallion	1.6604	4.1028	0.00
Thage	1197.8346	2959.9091	0.13
Estes	16807.3815	41531.8801	1.80
Rentzel	17524.4076	43303.6874	1.87
Ulto	63.8191	157.7003	0.01

Table 9-3

NUGENT	1.8183	4.4931	0.00
Mantachie	18769.6470	46380.7361	2.01
URBAN	37.5612	92.8157	0.00
Wrightsville	15057.0815	37206.8013	1.61
SARDIS	3070.7855	7588.0645	0.33
SOCAGEE	539.3635	1332.7941	0.06
SAWTOWN	3283.0470	8112.5733	0.35
Kirvin	35894.1823	88696.3191	3.84
MELHOMES	287.6089	710.6960	0.03
TEHRAN	8012.0318	19798.1311	0.86
Attoyac	21751.9088	53750.0542	2.33
BONN	1993.6020	4926.2901	0.21
Sawlit	5129.2993	12674.7551	0.55
Latex	12328.6662	30464.7505	1.32
MOLLVILLE	51687.7668	127723.0562	5.53

SUBBASIN #	1	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		16725.1920	41328.7857	1.79	
LANDUSE:					
Residential-High Density --> URHD		228.6096	564.9057	0.02	1.37
Range-Brush --> RNGB		2284.0400	5643.9770	0.24	13.66
Pasture --> PAST		1353.2328	3343.9059	0.14	8.09
Range-Grasses --> RNGE		1.8978	4.6896	0.00	0.01
Water --> WATR		66.8195	165.1143	0.01	0.40
Wetlands-Forested --> WETF		2137.9070	5282.8750	0.23	12.78
Wetlands-Mixed --> WETL		0.9489	2.3448	0.00	0.01
Forest-Deciduous --> FRSD		1226.2363	3030.0911	0.13	7.33
Forest-Evergreen --> FRSE		2721.6483	6725.3289	0.29	16.27
Forest-Mixed --> FRST		2700.2186	6672.3751	0.29	16.14
Residential-Low Density --> URLD		3546.0978	8762.5850	0.38	21.20
Residential-Medium Density --> URMD		457.5355	1130.5931	0.05	2.74
SOIL:					
URBAN		37.5612	92.8157	0.00	0.22
DARDEN		7.4332	18.3677	0.00	0.04
ERNO		18.0294	44.5515	0.00	0.11
PICKTON		5.6935	14.0689	0.00	0.03
BONN		85.1652	210.4474	0.01	0.51
BERNALDO		1553.6912	3839.2487	0.17	9.29

Table 9-4

SARDIS	1009.7253	2495.0818	0.11	6.04
PITS	28.0721	69.3675	0.00	0.17
SOCAGEE	75.4388	186.4130	0.01	0.45
GUYTON	393.8791	973.2949	0.04	2.36
WATER	26.2533	64.8733	0.00	0.16
SAWYER	36.9286	91.2525	0.00	0.22
KIRVIN	2263.0848	5592.1956	0.24	13.53
WOLFPEN	630.1591	1557.1546	0.07	3.77
SACUL	256.4445	633.6871	0.03	1.53
LATCH	13.8384	34.1953	0.00	0.08
DARBONNE	97.2639	240.3438	0.01	0.58
ELROSE	85.9559	212.4014	0.01	0.51
BIBB	8.2239	20.3218	0.00	0.05
SCOTTSVILLE	2767.5916	6838.8572	0.30	16.55
EASTWOOD	1761.3456	4352.3731	0.19	10.53
CUTHBERT	810.7694	2003.4516	0.09	4.85
LATEX	893.6413	2208.2324	0.10	5.34
BOWIE	1960.3807	4844.1987	0.21	11.72
BIENVILLE	19.6109	48.4596	0.00	0.12
METCALF	125.5732	310.2976	0.01	0.75
MOOREVILLE	354.0246	874.8125	0.04	2.12
IUKA	1291.3161	3190.9065	0.14	7.72
METH	108.0973	267.1139	0.01	0.65

SUBBASIN #	2	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		9040.5488	22339.6481	0.97	
LANDUSE:					
Range-Brush --> RNGB	1270.5841	3139.6769	0.14	14.05	
Pasture --> PAST	906.9620	2241.1484	0.10	10.03	
Water --> WATR	27.6489	68.3217	0.00	0.31	
Wetlands-Forested --> WETF	807.6630	1995.7757	0.09	8.93	
Forest-Deciduous --> FRSD	833.2580	2059.0221	0.09	9.22	
Forest-Evergreen --> FRSE	2341.6224	5786.2660	0.25	25.90	
Forest-Mixed --> FRST	2344.9402	5794.4646	0.25	25.94	
Residential-Low Density --> URLD	505.8163	1249.8975	0.05	5.59	
Residential-Medium Density --> URMD	2.0539	5.0753	0.00	0.02	
SOIL:					
ERNO	124.4199	307.4478	0.01	1.38	
PICKTON	2.7649	6.8322	0.00	0.03	

Table 9-5

	BONN	81.9987	202.6228	0.01	0.91
BERNALDO	286.6003	708.2037	0.03	3.17	
SARDIS	510.7931	1262.1954	0.05	5.65	
SOCAGEE	331.0755	818.1041	0.04	3.66	
GUYTON	97.7980	241.6638	0.01	1.08	
WATER	6.7937	16.7876	0.00	0.08	
WOLFPEN	7.6627	18.9349	0.00	0.08	
LATCH	21.3291	52.7053	0.00	0.24	
ELROSE	16.9843	41.9691	0.00	0.19	
SCOTTSVILLE	4209.7381	10402.4733	0.45	46.57	
EASTWOOD	1865.9828	4610.9368	0.20	20.64	
BIBB	26.5429	65.5889	0.00	0.29	
LATEX	452.7305	1118.7197	0.05	5.01	
BIENVILLE	30.6507	75.7395	0.00	0.34	
METCALF	75.8369	187.3968	0.01	0.84	
IUKA	623.4425	1540.5577	0.07	6.90	
METH	267.4041	660.7689	0.03	2.96	
<hr/>					
		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	3	94.7101	234.0334	0.01	
<hr/>					
LANDUSE:					
Range-Brush --> RNGB		3.8738	9.5723	0.00	4.09
Pasture --> PAST		0.3162	0.7814	0.00	0.33
Water --> WATR		9.0125	22.2703	0.00	9.52
Wetlands-Forested --> WETF		58.1858	143.7801	0.01	61.44
Forest-Deciduous --> FRSD		3.8738	9.5723	0.00	4.09
Forest-Evergreen --> FRSE		6.0083	14.8469	0.00	6.34
Residential-Low Density --> URLD		13.0444	32.2333	0.00	13.77
Residential-Medium Density --> URMD		0.3953	0.9768	0.00	0.42
<hr/>					
SOIL:					
Mantachie		3.3204	8.2048	0.00	3.51
Estes		66.7240	164.8783	0.01	70.45
Water		5.6921	14.0654	0.00	6.01
Latch		4.4272	10.9398	0.00	4.67
NUGENT		1.8183	4.4931	0.00	1.92
MOOREVILLE		12.7282	31.4519	0.00	13.44
<hr/>					
		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area

Table 9-6

SUBBASIN #	4	6209.9172	15345.0159	0.66
LANDUSE:				
Range-Brush --> RNGB	816.4326	2017.4457	0.09	13.15
Pasture --> PAST	1158.4581	2862.6078	0.12	18.65
Water --> WATR	25.7804	63.7047	0.00	0.42
Wetlands-Forested --> WETF	773.7288	1911.9226	0.08	12.46
Wetlands-Mixed --> WETL	2.5306	6.2532	0.00	0.04
Forest-Deciduous --> FRSD	642.2171	1586.9505	0.07	10.34
Forest-Evergreen --> FRSE	1094.1652	2703.7369	0.12	17.62
Forest-Mixed --> FRST	1302.6228	3218.8460	0.14	20.98
Residential-Low Density --> URLD	390.3440	964.5595	0.04	6.29
Residential-Medium Density --> URMD	3.6377	8.9890	0.00	0.06
SOIL:				
ESTES	64.9255	160.4342	0.01	1.05
ERNO	162.2743	400.9879	0.02	2.61
BONN	226.1718	558.8817	0.02	3.64
BERNALDO	836.2819	2066.4944	0.09	13.47
SARDIS	889.7407	2198.5938	0.10	14.33
SOCAGEE	106.8385	264.0032	0.01	1.72
WATER	0.2372	0.5862	0.00	0.00
GUYTON	219.2126	541.6854	0.02	3.53
KIRVIN	119.2542	294.6831	0.01	1.92
WOLFPEN	23.0126	56.8652	0.00	0.37
SACUL	14.3137	35.3698	0.00	0.23
ELROSE	112.6114	278.2684	0.01	1.81
SCOTTSVILLE	1664.7348	4113.6430	0.18	26.81
EASTWOOD	988.9083	2443.6419	0.11	15.92
CUTHBERT	40.7267	100.6378	0.00	0.66
LATEX	324.2322	801.1941	0.03	5.22
BOWIE	1.6607	4.1037	0.00	0.03
BIENVILLE	20.7983	51.3937	0.00	0.33
MOOREVILLE	1.8979	4.6899	0.00	0.03
METCALF	155.6315	384.5732	0.02	2.51
IUKA	224.8274	555.5597	0.02	3.62
METH	11.6249	28.7257	0.00	0.19

SUBBASIN #	5	5538.7244	13686.4649	0.59

Area [ha]		Area [acres]	%Wat.Area	%Sub.Area

Table 9-7

LANDUSE:

	Range-Brush --> RNGB	666.2408	1646.3143	0.07	12.03
	Pasture --> PAST	708.8543	1751.6143	0.08	12.80
	Range-Grasses --> RNGE	1.4231	3.5165	0.00	0.03
	Water --> WATR	107.4429	265.4968	0.01	1.94
	Wetlands-Forested --> WETF	1751.2637	4327.4603	0.19	31.62
SR319	Pasture, no litter --> TBPA	21.6625	53.5291	0.00	0.39
	Wetlands-Mixed --> WETL	11.7800	29.1089	0.00	0.21
	Forest-Deciduous --> FRSD	304.3029	751.9478	0.03	5.49
	Forest-Evergreen --> FRSE	984.6164	2433.0364	0.11	17.78
	Forest-Mixed --> FRST	766.4101	1893.8377	0.08	13.84
	Residential-Low Density --> URLD	208.9563	516.3414	0.02	3.77
	SR Grass Establishment --> TBAP	5.7714	14.2614	0.00	0.10

SOIL:

Mantachie	173.6163	429.0146	0.02	3.13
Estes	1840.2856	4547.4377	0.20	33.23
Marietta	204.5289	505.4011	0.02	3.69
Wrightsville	307.3863	759.5669	0.03	5.55
Bonn	40.6370	100.4160	0.00	0.73
BERNALDO	5.5342	13.6753	0.00	0.10
Briley	12.7287	31.4533	0.00	0.23
Pits	11.3056	27.9367	0.00	0.20
Kullit	4.9017	12.1124	0.00	0.09
Water	89.4962	221.1496	0.01	1.62
Kirvin	91.7890	226.8151	0.01	1.66
GUYTON	24.9040	61.5390	0.00	0.45
Lilbert	191.2468	472.5803	0.02	3.45
Sacul	881.5219	2178.2846	0.09	15.92
Latch	264.0613	652.5086	0.03	4.77
Thage	5.2180	12.8939	0.00	0.09
Cart	360.8310	891.6315	0.04	6.51
Cuthbert	3.4787	8.5959	0.00	0.06
Tenaha	178.0437	439.9549	0.02	3.21
Elrose	12.4125	30.6718	0.00	0.22
SCOTTSVILLE	56.0537	138.5115	0.01	1.01
EASTWOOD	19.2116	47.4729	0.00	0.35
Darco	228.2470	564.0097	0.02	4.12
Bowie	219.7085	542.9106	0.02	3.97
MOOREVILLE	0.5534	1.3675	0.00	0.01
Iuka	273.4694	675.7566	0.03	4.94
METCALF	37.5536	92.7969	0.00	0.68

Table 9-8

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	6	8600.7552	21252.8961	0.92		
LANDUSE:						
Range-Brush --> RNGB		1195.9724	2955.3075	0.13	13.91	
Pasture --> PAST		1106.7171	2734.7534	0.12	12.87	
Range-Grasses --> RNGE		0.4743	1.1721	0.00	0.01	
Water --> WATR		17.8669	44.1499	0.00	0.21	
Wetlands-Forested --> WETF		1197.1582	2958.2378	0.13	13.92	
Wetlands-Mixed --> WETL		2.9251	7.2281	0.00	0.03	
Forest-Deciduous --> FRSD		775.6270	1916.6130	0.08	9.02	
Forest-Evergreen --> FRSE		2177.0681	5379.6442	0.23	25.31	
Forest-Mixed --> FRST		1710.0792	4225.6912	0.18	19.88	
Residential-Low Density --> URLD		414.8905	1025.2151	0.04	4.82	
Residential-Medium Density --> URMD		1.9764	4.8838	0.00	0.02	
SOIL:						
Mantachie		56.2885	139.0917	0.01	0.65	
Estes		663.3662	1639.2111	0.07	7.71	
Marietta		321.9196	795.4794	0.03	3.74	
ERNO		11.8585	29.3030	0.00	0.14	
PICKTON		0.4743	1.1721	0.00	0.01	
Wrightsville		408.1706	1008.6100	0.04	4.75	
Bonn		259.8599	642.1269	0.03	3.02	
BERNALDO		98.5049	243.4104	0.01	1.15	
SARDIS		460.6644	1138.3247	0.05	5.36	
Kullit		28.3814	70.1319	0.00	0.33	
WATER		5.0596	12.5026	0.00	0.06	
Kirvin		7.8266	19.3400	0.00	0.09	
GUYTON		208.9473	516.3193	0.02	2.43	
Lilbert		87.5160	216.2563	0.01	1.02	
Sacul		502.9598	1242.8389	0.05	5.85	
WOLFPEN		8.6172	21.2935	0.00	0.10	
Latch		137.2427	339.1336	0.01	1.60	
Cart		610.5562	1508.7150	0.07	7.10	
Elrose		41.0305	101.3885	0.00	0.48	
SCOTTSVILLE		3130.9684	7736.7793	0.33	36.40	
EASTWOOD		793.6519	1961.1536	0.08	9.23	
BIBB		4.1900	10.3537	0.00	0.05	
Bowie		73.3648	181.2880	0.01	0.85	

Table 9-9

LATEX	198.5909	490.7279	0.02	2.31
METCALF	317.3343	784.1489	0.03	3.69
IUKA	163.4106	403.7956	0.02	1.90
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SUBBASIN #	7	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
		1992.4704	4923.4940	0.21
LANDUSE:				
SR319 - Poultry Headquarters --> TBHQ	Range-Brush --> RNGB	272.5090	673.3835	0.03 13.68
Pasture --> PAST	6.5617	16.2143	0.00	0.33
Range-Grasses --> RNGE	84.9861	210.0050	0.01	4.27
Water --> WATR	0.6325	1.5628	0.00	0.03
Wetlands-Forested --> WETF	48.3038	119.3610	0.01	2.42
SR319 Pasture, no litter --> TBPA	474.7365	1173.0977	0.05	23.83
Wetlands-Mixed --> WETL	6.7989	16.8004	0.00	0.34
TPHH, SR319 Pasture --> TPHH	16.9182	41.8056	0.00	0.85
Forest-Deciduous --> FRSD	84.2746	208.2468	0.01	4.23
Forest-Evergreen --> FRSE	480.8239	1188.1399	0.05	24.13
TPHV, SR319 Pasture --> TPHV	22.1359	54.6990	0.00	1.11
Forest-Mixed --> FRST	407.0638	1005.8751	0.04	20.43
Residential-Low Density --> URLD	74.6297	184.4137	0.01	3.75
TPVM, SR319 Pasture --> TPVM	4.5062	11.1351	0.00	0.23
Residential-Medium Density --> URMD	1.2649	3.1257	0.00	0.06
SOIL:				
Mantachie	87.4369	216.0610	0.01	4.39
Estes	528.9695	1307.1102	0.06	26.55
Marietta	18.2621	45.1267	0.00	0.92
Wrightsville	257.1720	635.4849	0.03	12.91
Briley	26.4841	65.4434	0.00	1.33
Kullit	46.4064	114.6725	0.00	2.33
Water	48.6200	120.1424	0.01	2.44
Kirvin	12.4910	30.8659	0.00	0.63
Lilbert	65.8544	162.7295	0.01	3.31
Sacul	180.4078	445.7967	0.02	9.05
Latch	418.1318	1033.2246	0.04	20.99
Cart	169.9723	420.0100	0.02	8.53
Cuthbert	27.1956	67.2016	0.00	1.36
Elrose	5.0596	12.5026	0.00	0.25
Darco	14.3884	35.5543	0.00	0.72

Table 9-10

Bowie	81.1914	200.6280	0.01	4.07
Iuka	4.4272	10.9398	0.00	0.22
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:				
Residential-High Density --> URHD	11.2273	27.7432	0.00	0.09
Range-Brush --> RNGB	1479.4750	3655.8566	0.16	12.11
SR319 - Poultry Headquarters --> TBHQ	19.3711	47.8669	0.00	0.16
Pasture --> PAST	2760.8116	6822.1035	0.30	22.60
Range-Grasses --> RNGE	72.0287	177.9866	0.01	0.59
Water --> WATR	193.3944	477.8872	0.02	1.58
Wetlands-Forested --> WETF	1298.0985	3207.6664	0.14	10.63
SR319 Pasture, no litter --> TBPA	68.6289	169.5855	0.01	0.56
Wetlands-Mixed --> WETL	4.7439	11.7225	0.00	0.04
TPMH, SR319 Pasture --> TPMH	36.7655	90.8494	0.00	0.30
TPML, SR319 Pasture --> TPML	14.1527	34.9721	0.00	0.12
TPMV, SR319 Pasture --> TPMV	1.6604	4.1029	0.00	0.01
TPHH, SR319 Pasture --> TPHH	2.7673	6.8381	0.00	0.02
Forest-Deciduous --> FRSD	1054.8928	2606.6930	0.11	8.63
Forest-Evergreen --> FRSE	2473.3292	6111.7201	0.26	20.25
TPHV, SR319 Pasture --> TPHV	2.5301	6.2520	0.00	0.02
Forest-Mixed --> FRST	1686.1524	4166.5668	0.18	13.80
Residential-Low Density --> URLD	902.2963	2229.6193	0.10	7.39
Agricultural Land-Row Crops --> AGRR	97.4878	240.8973	0.01	0.80
Residential-Medium Density --> URMD	28.5427	70.5304	0.00	0.23
SR 319 Hayland - no litter --> TBHA	8.3810	20.7097	0.00	0.07
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SOIL:				
Mantachie	262.8930	649.6218	0.03	2.15
Estes	400.3090	989.1835	0.04	3.28
Nahatche	1130.7958	2794.2529	0.12	9.26
Rentzel	5.8509	14.4577	0.00	0.05
Marietta	179.6370	443.8920	0.02	1.47
Bonn	18.7385	46.3039	0.00	0.15
Wrightsville	104.1294	257.3088	0.01	0.85
Briley	188.3342	465.3832	0.02	1.54
Pits	15.2597	37.7074	0.00	0.12
Sawlit	1.6604	4.1029	0.00	0.01
Naconiche	9.7251	24.0311	0.00	0.08

Table 9-11

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	9	10041.6456	24813.4084	1.07		
LANDUSE:						
SR319 - Poultry Headquarters --> TBHQ	Range-Brush --> RNGB Pasture --> PAST Water --> WATR Wetlands-Forested --> WETF	1217.0015 1.2649 970.7393 43.7975 777.2081	3007.2715 3.1257 2398.7454 108.2258 1920.5201	0.13 0.00 0.10 0.00 0.08	12.12 0.01 9.67 0.44 7.74	
SR319 Pasture, no litter --> TBPA	Forest-Deciduous --> FRSD Forest-Evergreen --> FRSE Forest-Mixed --> FRST	41.9001 9.4078 545.1762 3920.5093 1994.3677	103.5373 23.2471 1347.1576 9687.7744 4928.1822	0.00 0.00 0.06 0.42 0.21	0.42 0.09 5.43 39.04 19.86	
Residential-Low Density --> URLD	Residential-Medium Density --> URMD	507.3079 3.8738	1253.5833 9.5723	0.05 0.00	5.05 0.04	
SR 319 Hayland - no litter --> TBHA	SR Grass Establishment --> TBAP	4.6644 4.4272	11.5259 10.9398	0.00 0.00	0.05 0.04	
SOIL:	Mantachie Nahatche Marietta ERNO	494.4217 13.5978 553.7934 6.4827	1221.7407 33.6008 1368.4511 16.0190	0.05 0.00 0.06 0.00	4.92 0.14 5.51 0.06	

Table 9-12

Wrightsville	1042.6020	2576.3217	0.11	10.38
BERNALDO	264.9986	654.8249	0.03	2.64
SARDIS	64.9057	160.3852	0.01	0.65
SOCAGEE	3.0042	7.4234	0.00	0.03
Kullit	189.4993	468.2623	0.02	1.89
Water	29.0139	71.6947	0.00	0.29
Kirvin	469.5978	1160.3997	0.05	4.68
GUYTON	155.5049	384.2603	0.02	1.55
Lilbert	56.4466	139.4824	0.01	0.56
Sacul	648.5035	1602.4846	0.07	6.46
WOLFPEN	1.4230	3.5164	0.00	0.01
Thage	164.2802	405.9445	0.02	1.64
Cart	1858.4689	4592.3696	0.20	18.51
Cuthbert	54.4702	134.5985	0.01	0.54
Elrose	56.1304	138.7010	0.01	0.56
SCOTTSVILLE	2111.2928	5217.1100	0.23	21.03
EASTWOOD	193.0569	477.0532	0.02	1.92
Bowie	998.5673	2467.5098	0.11	9.94
LATEX	265.3149	655.6063	0.03	2.64
METCALF	62.3759	154.1339	0.01	0.62
Iuka	251.6380	621.8101	0.03	2.51
METH	32.2552	79.7042	0.00	0.32
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		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	10	10645.9568	26306.6916	1.14
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LANDUSE:				
Residential-High Density --> URHD	0.5534	1.3675	0.00	0.01
Range-Brush --> RNGB	1452.7348	3589.7803	0.16	13.65
Pasture --> PAST	1148.6685	2838.4173	0.12	10.79
Water --> WATR	26.0899	64.4695	0.00	0.25
Wetlands-Forested --> WETF	1167.6430	2885.3042	0.12	10.97
Wetlands-Mixed --> WETL	2.1346	5.2748	0.00	0.02
Forest-Deciduous --> FRSD	640.3892	1582.4338	0.07	6.02
Forest-Evergreen --> FRSE	3273.7329	8089.5577	0.35	30.75
Forest-Mixed --> FRST	2185.5456	5400.5925	0.23	20.53
Residential-Low Density --> URLD	744.6699	1840.1165	0.08	6.99
Residential-Medium Density --> URMD	3.7949	9.3774	0.00	0.04
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SOIL:				
Mantachie	533.2624	1317.7180	0.06	5.01

Table 9-13

Nahatche		7.4317		18.3640	0.00
Marietta		610.8206		1509.3683	0.07
Wrightsville		491.8347		1215.3482	0.05
Bonn		385.4194		952.3907	0.04
Briley		4.1902		10.3542	0.00
SARDIS		116.9303		288.9407	0.01
Kullit		352.7675		871.7061	0.04
SOCAGEE		23.0066		56.8504	0.00
Water		11.1475		27.5461	0.00
GUYTON		139.5416		344.8143	0.01
Kirvin		291.8119		721.0819	0.03
Lilbert		26.5643		65.6417	0.00
Sacul		1182.1111		2921.0555	0.13
Thage		85.2271		210.6004	0.01
Cart		2433.0047		6012.0761	0.26
Elrose		0.2372		0.5861	0.00
EASTWOOD		31.7823		78.5356	0.00
SCOTTSVILLE		1265.9151		3128.1394	0.14
Darco		3.3996		8.4006	0.00
LATEX		114.0842		281.9076	0.01
Bowie		2182.1460		5392.1919	0.23
METCALF		346.8380		857.0539	0.04
MOOREVILLE		4.0321		9.9635	0.00
METH		2.4509		6.0562	0.02
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	11	10831.2656	26764.5989	1.16	
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LANDUSE:					
SR319 - Poultry Headquarters	Range-Brush --> RNGB	1476.2253	3647.8266	0.16	13.63
	Headquarters --> TBHQ	6.8783	16.9966	0.00	0.06
	Pasture --> PAST	978.5369	2418.0136	0.10	9.03
	Water --> WATR	18.1840	44.9336	0.00	0.17
SR319	Wetlands-Forested --> WETF	1700.2049	4201.2912	0.18	15.70
Pasture, no litter	--> TBPA	101.4351	250.6513	0.01	0.94
	Wetlands-Mixed --> WETL	1.6603	4.1026	0.00	0.02
	Forest-Deciduous --> FRSD	806.1841	1992.1212	0.09	7.44
	Forest-Evergreen --> FRSE	3099.3458	7658.6384	0.33	28.61
	Forest-Mixed --> FRST	2205.4041	5449.6638	0.24	20.36
	Residential-Low Density --> URLD	429.4589	1061.2143	0.05	3.96
	Residential-Medium Density --> URMD	2.2137	5.4702	0.00	0.02

Table 9-14

SR 319 Hayland - no litter --> TBHA 5.5343 13.6754 0.00 0.05

SOIL:

Mantachie	251.5718	621.6465	0.03	2.32
Estes	796.1434	1967.3101	0.09	7.35
Nahatche	1394.3182	3445.4300	0.15	12.87
Marietta	201.6844	498.3722	0.02	1.86
Bonn	131.1620	324.1080	0.01	1.21
Wrightsville	437.7603	1081.7275	0.05	4.04
BERNALDO	16.1284	39.8541	0.00	0.15
SARDIS	18.0259	44.5429	0.00	0.17
Kullit	220.1846	544.0872	0.02	2.03
Water	10.9104	26.9602	0.00	0.10
Kirvin	153.6153	379.5912	0.02	1.42
GUYTON	3.5577	8.7914	0.00	0.03
Lilbert	83.5674	206.4992	0.01	0.77
Sacul	2617.2324	6467.3120	0.28	24.16
WOLFPEN	5.5343	13.6754	0.00	0.05
Latch	818.3595	2022.2072	0.09	7.56
Thage	26.7226	66.0328	0.00	0.25
Cart	1946.7168	4810.4345	0.21	17.97
SCOTTSVILLE	540.1441	1334.7232	0.06	4.99
EASTWOOD	148.3183	366.5019	0.02	1.37
Bowie	808.6350	1998.1775	0.09	7.47
LATEX	57.1610	141.2478	0.01	0.53
Iuka	97.0868	239.9063	0.01	0.90
METH	46.7250	115.4598	0.00	0.43

SUBBASIN #	12	Area [ha]	Area [acres] %Wat.Area %Sub.Area		
			Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	12	28064.5568	69348.9231	3.00	
LANDUSE:					
Residential-High Density --> URHD		11.1470	27.5448	0.00	0.04
Range-Brush --> RNGB		2153.6673	5321.8195	0.23	7.67
SR319 - Poultry Headquarters --> TBHQ		18.9736	46.8848	0.00	0.07
Pasture --> PAST		9156.7621	22626.8170	0.98	32.63
Range-Grasses --> RNGE		27.7490	68.5691	0.00	0.10
TPLH, SR319 Pastureland --> TPLH		29.1720	72.0854	0.00	0.10
Water --> WATR		183.0167	452.2433	0.02	0.65
Wetlands-Forested --> WETF		1990.2567	4918.0239	0.21	7.09
SR319 Pasture, no litter --> TBPA		688.8225	1702.1149	0.07	2.45

Table 9-15

Wetlands-Mixed --> WETL	6.0083	14.8469	0.00	0.02
TPMH, SR319 Pasture --> TPMH	10.0402	24.8099	0.00	0.04
TPMM, SR319 Pasture --> TPMM	10.2774	25.3960	0.00	0.04
TPSS, SR319 Pasture --> TPSS	78.9778	195.1581	0.01	0.28
TPHH, SR319 Pasture --> TPHH	6.4827	16.0190	0.00	0.02
Forest-Deciduous --> FRSD	2549.1098	6298.9777	0.27	9.08
Forest-Evergreen --> FRSE	4695.0295	11601.6526	0.50	16.73
TPHM, SR319 Pasture --> TPHM	40.6352	100.4117	0.00	0.14
Forest-Mixed --> FRST	4670.0475	11539.9209	0.50	16.64
Residential-Low Density --> URLD	1496.7837	3698.6275	0.16	5.33
Agricultural Land-Row Crops --> AGRR	12.4910	30.8659	0.00	0.04
Residential-Medium Density --> URMD	45.3786	112.1329	0.00	0.16
SR 319 Hayland - no litter --> TBHA	82.7725	204.5351	0.01	0.29
SR Grass Establishment --> TBAP	100.9556	249.4664	0.01	0.36

SOIL:

Mantachie	124.5146	307.6817	0.01	0.44
Laneville	132.7365	327.9985	0.01	0.47
Estes	230.8461	570.4322	0.02	0.82
Nahatche	3521.8255	8702.6069	0.38	12.55
Attoyac	3.0832	7.6188	0.00	0.01
Marietta	355.5978	878.7000	0.04	1.27
Derly	7.8266	19.3400	0.00	0.03
Dreka	46.2483	114.2818	0.00	0.16
Bonn	44.5090	109.9840	0.00	0.16
Wrightsville	371.8045	918.7474	0.04	1.32
Woodtell	230.9251	570.6275	0.02	0.82
Briley	192.9778	476.8578	0.02	0.69
Pits	20.3967	50.4012	0.00	0.07
Sawlit	1166.1679	2881.6592	0.12	4.16
Kullit	2484.5203	6139.3739	0.27	8.85
Water	149.6547	369.8041	0.02	0.53
Kirvin	2153.8254	5322.2102	0.23	7.67
Lilbert	661.0736	1633.5458	0.07	2.36
Sacul	6164.7758	15233.4691	0.66	21.97
Latch	42.5326	105.1002	0.00	0.15
Thage	189.0250	467.0902	0.02	0.67
Cart	3400.7104	8403.3254	0.36	12.12
Tenaha	130.4438	322.3332	0.01	0.46
Elrose	366.5867	905.8541	0.04	1.31
Cuthbert	1017.8572	2515.1761	0.11	3.63
Mollville	20.2386	50.0105	0.00	0.07
Darco	151.3149	373.9066	0.02	0.54

Table 9-16

Latex	323.5007	799.3864	0.03	1.15
Bowie	3234.0585	7991.5202	0.35	11.52
Iuka	453.1540	1119.7662	0.05	1.61
Maben	233.4549	576.8788	0.02	0.83
Meth	353.2261	872.8394	0.04	1.26
Tonkawa	31.8599	78.7275	0.00	0.11
Owentown	13.6768	33.7962	0.00	0.05
Iulus	39.6075	97.8721	0.00	0.14

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	13	610.6353	1508.9104	0.07	

LANDUSE:

Range-Brush --> RNGB	12.4296	30.7142	0.00	2.04
Range-Grasses --> RNGE	0.6334	1.5651	0.00	0.10
Water --> WATR	26.3635	65.1455	0.00	4.32
Wetlands-Forested --> WETF	451.2668	1115.1029	0.05	73.90
Wetlands-Mixed --> WETL	1.5042	3.7170	0.00	0.25
Forest-Deciduous --> FRSD	14.6464	36.1919	0.00	2.40
Forest-Evergreen --> FRSE	48.6893	120.3137	0.01	7.97
Forest-Mixed --> FRST	29.6094	73.1664	0.00	4.85
Residential-Low Density --> URLD	25.4926	62.9935	0.00	4.17

SOIL:

Estes	460.3714	1137.6006	0.05	75.39
Marietta	16.7840	41.4740	0.00	2.75
Bonn	3.5626	8.8034	0.00	0.58
Wrightsville	24.5426	60.6459	0.00	4.02
Water	17.0215	42.0609	0.00	2.79
Thage	0.7125	1.7607	0.00	0.12
Latch	41.0099	101.3374	0.00	6.72
Cuthbert	10.8462	26.8016	0.00	1.78
Bowie	35.7847	88.4257	0.00	5.86

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	14	1418.7546	3505.8136	0.15	

LANDUSE:

Range-Brush --> RNGB	96.7710	239.1260	0.01	6.82
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Table 9-17

Pasture --> PAST	91.7111	226.6227	0.01	6.46
Range-Grasses --> RNGE	1.1069	2.7351	0.00	0.08
Water --> WATR	75.8988	187.5498	0.01	5.35
Wetlands-Forested --> WETF	725.4663	1792.6634	0.08	51.13
Wetlands-Mixed --> WETL	1.1069	2.7351	0.00	0.08
Forest-Deciduous --> FRSD	74.3967	183.8379	0.01	5.24
Forest-Evergreen --> FRSE	150.2955	371.3877	0.02	10.59
Forest-Mixed --> FRST	156.0670	385.6493	0.02	11.00
Residential-Low Density --> URLD	45.5393	112.5299	0.00	3.21
Residential-Medium Density --> URMD	0.3953	0.9768	0.00	0.03

SOIL:

Mantachie	3.0834	7.6192	0.00	0.22
Estes	815.2008	2014.4020	0.09	57.46
Wrightsville	123.6518	305.5499	0.01	8.72
Pits	3.6368	8.9868	0.00	0.26
Kullit	30.3595	75.0199	0.00	2.14
Kirvin	4.8227	11.9172	0.00	0.34
Water	66.5696	164.4968	0.01	4.69
Sacul	131.3998	324.6956	0.01	9.26
Thage	2.6881	6.6424	0.00	0.19
Latch	3.0043	7.4238	0.00	0.21
Cart	168.8749	417.2983	0.02	11.90
Bowie	65.4627	161.7617	0.01	4.61

SUBBASIN #	15	Area [ha]	Area [acres] %Wat.Area %Sub.Area		
			Area [acres]	%Wat.Area	%Sub.Area
		8978.2520	22185.7096	0.96	

LANDUSE:

Range-Brush --> RNGB	1051.9480	2599.4161	0.11	11.72
Pasture --> PAST	1960.7577	4845.1303	0.21	21.84
Range-Grasses --> RNGE	4.5868	11.3341	0.00	0.05
Water --> WATR	389.0832	961.4439	0.04	4.33
Wetlands-Forested --> WETF	923.5189	2282.0614	0.10	10.29
SR319 Pasture, no litter --> TBPA	2.4515	6.0579	0.00	0.03
Wetlands-Mixed --> WETL	0.9490	2.3450	0.00	0.01
Forest-Deciduous --> FRSD	685.2450	1693.2747	0.07	7.63
Forest-Evergreen --> FRSE	1792.6295	4429.6771	0.19	19.97
Forest-Mixed --> FRST	1640.2386	4053.1115	0.18	18.27
Residential-Low Density --> URLD	430.9966	1065.0141	0.05	4.80
Agricultural Land-Row Crops --> AGRR	68.4850	169.2298	0.01	0.76

Table 9-18

Residential-Medium Density --> URMD	27.3624	67.6137	0.00	0.30
SOIL:				
Laneville	172.7940	426.9827	0.02	1.92
Attoyac	42.6252	105.3289	0.00	0.47
Rentzel	47.1328	116.4676	0.01	0.52
Dreka	362.6698	896.1752	0.04	4.04
Woodtell	325.4222	804.1345	0.03	3.62
Bernaldo	106.2070	262.4429	0.01	1.18
Pits	25.0690	61.9467	0.00	0.28
Sawlit	309.0522	763.6835	0.03	3.44
Naconiche	93.5539	231.1765	0.01	1.04
Kirvin	1295.5995	3201.4911	0.14	14.43
Water	400.9454	990.7562	0.04	4.47
Sacul	50.0589	123.6980	0.01	0.56
Lilbert	904.9347	2236.1388	0.10	10.08
Ulto	63.8191	157.7003	0.01	0.71
Cuthbert	1585.4348	3917.6886	0.17	17.66
Tenaha	822.7685	2033.1022	0.09	9.16
Mattex	11.7832	29.1169	0.00	0.13
Latex	327.1620	808.4336	0.03	3.64
Darco	328.1110	810.7786	0.04	3.65
Bowie	385.2081	951.8686	0.04	4.29
Pirkey	56.4645	139.5266	0.01	0.63
Woden	31.3164	77.3845	0.00	0.35
Hannahatchee	39.7782	98.2940	0.00	0.44
Bienville	6.0893	15.0470	0.00	0.07
Maben	15.1047	37.3243	0.00	0.17
Redsprings	782.2786	1933.0495	0.08	8.71
Meth	27.3624	67.6137	0.00	0.30
Gallime	48.3981	119.5942	0.01	0.54
Miscellaneous	5.0612	12.5066	0.00	0.06
Betis	231.1565	571.1993	0.02	2.57
Iulus	74.8906	185.0584	0.01	0.83
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		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	16	18248.9344	45094.0293	1.95
LANDUSE:				
Residential-High Density --> URHD	3.3204	8.2048	0.00	0.02

Table 9-19

Range-Brush --> RNGB	1597.3441	3947.1170	0.17	8.75
SR319 - Poultry Headquarters --> TBHQ	19.6061	48.4477	0.00	0.11
Pasture --> PAST	5558.8047	13736.0844	0.59	30.46
Range-Grasses --> RNGE	16.9972	42.0010	0.00	0.09
TPLH, SR319 Pastureland --> TPLH	23.2427	57.4339	0.00	0.13
Water --> WATR	494.0264	1220.7639	0.05	2.71
Wetlands-Forested --> WETF	1030.5854	2546.6279	0.11	5.65
TPLM, SR319 Pasture --> TPML	3.0042	7.4234	0.00	0.02
Wetlands-Mixed --> WETL	5.0596	12.5026	0.00	0.03
TPSS, SR319 Pasture --> TPSS	62.4549	154.3292	0.01	0.34
Forest-Deciduous --> FRSD	1823.8420	4506.8047	0.19	9.99
Forest-Evergreen --> FRSE	3007.7977	7432.4184	0.32	16.48
Forest-Mixed --> FRST	3608.8670	8917.6909	0.39	19.78
Residential-Low Density --> URLD	952.9515	2354.7908	0.10	5.22
Agricultural Land-Row Crops --> AGRR	14.4674	35.7497	0.00	0.08
Residential-Medium Density --> URMD	26.5631	65.6388	0.00	0.15

SOIL:

Laneville	1587.1457	3921.9164	0.17	8.70
Attoyac	32.0180	79.1182	0.00	0.18
Rentzel	203.4924	502.8399	0.02	1.12
Dreka	610.0819	1507.5428	0.07	3.34
Derly	21.6616	53.5269	0.00	0.12
Woodtell	1724.7837	4262.0268	0.18	9.45
Bernaldo	179.8544	444.4292	0.02	0.99
Pits	6.1664	15.2376	0.00	0.03
Sawlit	1574.2594	3890.0738	0.17	8.63
Kullit	63.4036	156.6735	0.01	0.35
Naconiche	26.4841	65.4434	0.00	0.15
Water	436.8683	1079.5233	0.05	2.39
Kirvin	1912.0695	4724.8192	0.20	10.48
Lilbert	983.8627	2431.1740	0.11	5.39
Sacul	631.5063	1560.4836	0.07	3.46
Cart	8.9334	22.0749	0.00	0.05
Thage	1.7393	4.2978	0.00	0.01
Cuthbert	1183.4813	2924.4416	0.13	6.49
Tenaha	802.5063	1983.0332	0.09	4.40
Mattex	32.3343	79.8996	0.00	0.18
Latex	1213.6020	2998.8712	0.13	6.65
Darco	460.6644	1138.3247	0.05	2.52
Bowie	846.4619	2091.6497	0.09	4.64
Woden	2.3717	5.8606	0.00	0.01
Iuka	96.4494	238.3312	0.01	0.53

Table 9-20

Maben	2356.2900	5822.5104	0.25	12.91
Meth	919.1942	2271.3749	0.10	5.04
Gallime	18.3412	45.3220	0.00	0.10
Iulus	158.9043	392.6605	0.02	0.87
Betis	154.0028	380.5486	0.02	0.84
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SUBBASIN #	17	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:		5456.7424	13483.8833	0.58
Range-Brush --> RNGB	578.1429	1428.6200	0.06	10.60
SR319 - Poultry Headquarters --> TBHQ	1.0277	2.5396	0.00	0.02
Pasture --> PAST	307.2150	759.1436	0.03	5.63
Water --> WATR	8.8544	21.8796	0.00	0.16
Wetlands-Forested --> WETF	874.5271	2161.0002	0.09	16.03
SR319 Pasture, no litter --> TBPA	38.8960	96.1139	0.00	0.71
Wetlands-Mixed --> WETL	4.1900	10.3537	0.00	0.08
Forest-Deciduous --> FRSD	335.1221	828.1034	0.04	6.14
Forest-Evergreen --> FRSE	1917.6035	4738.4940	0.20	35.14
Forest-Mixed --> FRST	1083.3163	2676.9287	0.12	19.85
Residential-Low Density --> URLD	300.9695	743.7107	0.03	5.52
Residential-Medium Density --> URMD	1.3440	3.3210	0.00	0.02
SR Grass Establishment --> TBAP	5.5340	13.6747	0.00	0.10
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SOIL:				
Mantachie	341.1304	842.9503	0.04	6.25
Estes	209.5007	517.6867	0.02	3.84
Nahatche	318.5992	787.2745	0.03	5.84
Wrightsville	322.6311	797.2376	0.03	5.91
Kullit	11.6214	28.7170	0.00	0.21
Water	6.0874	15.0422	0.00	0.11
Kirvin	152.0264	375.6647	0.02	2.79
Lilbert	44.0347	108.8119	0.00	0.81
Sacul	2125.8393	5253.0551	0.23	38.96
Latch	17.0763	42.1964	0.00	0.31
Thage	6.4827	16.0190	0.00	0.12
Cart	1351.4772	3339.5678	0.14	24.77
Cuthbert	54.2330	134.0125	0.01	0.99
Bowie	496.0028	1225.6477	0.05	9.09
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Table 9-21

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	18	2850.4746	7043.6653	0.30		
LANDUSE:						
Residential-High Density --> URHD		3.4785	8.5956	0.00	0.12	
Range-Brush --> RNGB		174.7157	431.7312	0.02	6.13	
SR319 - Poultry Headquarters --> TBHQ		5.6921	14.0655	0.00	0.20	
Pasture --> PAST		124.4355	307.4864	0.01	4.37	
Range-Grasses --> RNGE		0.7115	1.7582	0.00	0.02	
Water --> WATR		63.4827	156.8688	0.01	2.23	
Wetlands-Forested --> WETF		1433.3802	3541.9540	0.15	50.29	
Wetlands-Mixed --> WETL		1.9764	4.8838	0.00	0.07	
TPSS, SR319 Pasture --> TPSS		16.0485	39.6568	0.00	0.56	
TPHH, SR319 Pasture --> TPHH		14.0721	34.7729	0.00	0.49	
Forest-Deciduous --> FRSD		102.6158	253.5688	0.01	3.60	
Forest-Evergreen --> FRSE		552.5285	1365.3255	0.06	19.38	
TPHV, SR319 Pasture --> TPHV		3.2413	8.0095	0.00	0.11	
Forest-Mixed --> FRST		211.7143	523.1566	0.02	7.43	
TPVH, SR319 Pasture --> TPVH		5.2968	13.0887	0.00	0.19	
Residential-Low Density --> URLD		124.1193	306.7050	0.01	4.35	
Residential-Medium Density --> URMD		12.9653	32.0380	0.00	0.45	
SOIL:						
Mantachie		39.2122	96.8953	0.00	1.38	
Estes		1313.4509	3245.6028	0.14	46.08	
Wrightsville		645.7365	1595.6473	0.07	22.65	
Pits		8.4591	20.9028	0.00	0.30	
Kirvin		9.0125	22.2703	0.00	0.32	
Water		52.0194	128.5426	0.01	1.82	
Sacul		177.5617	438.7639	0.02	6.23	
Latch		261.5201	646.2293	0.03	9.17	
Thage		27.1956	67.2016	0.00	0.95	
Cart		303.6574	750.3527	0.03	10.65	
Bowie		12.6491	31.2566	0.00	0.44	
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SUBBASIN #	19	283.4980	700.5377	0.03		
LANDUSE:						
Range-Brush --> RNGB		34.8641	86.1509	0.00	12.30	

Table 9-22

Water --> WATR	11.2261	27.7402	0.00	3.96
Wetlands-Forested --> WETF	164.0430	405.3586	0.02	57.86
Forest-Deciduous --> FRSD	15.3370	37.8986	0.00	5.41
Forest-Evergreen --> FRSE	39.5284	97.6768	0.00	13.94
Forest-Mixed --> FRST	13.9931	34.5776	0.00	4.94
Residential-Low Density --> URLD	4.5062	11.1352	0.00	1.59

SOIL:

Estes	185.3093	457.9087	0.02	65.37
Marietta	54.7074	135.1846	0.01	19.30
Wrightsville	12.4119	30.6705	0.00	4.38
Water	8.8544	21.8796	0.00	3.12
Sacul	22.2150	54.8943	0.00	7.84

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	20	8268.0048	20430.6533	0.88	

LANDUSE:

Residential-High Density --> URHD	66.4122	164.1079	0.01	0.80
Range-Brush --> RNGB	956.5731	2363.7400	0.10	11.57
SR319 - Poultry Headquarters --> TBHQ	4.9019	12.1127	0.00	0.06
Pasture --> PAST	1604.8038	3965.5504	0.17	19.41
Water --> WATR	62.6963	154.9257	0.01	0.76
Wetlands-Forested --> WETF	750.9324	1855.5916	0.08	9.08
SR319 Pasture, no litter --> TBPA	70.1281	173.2901	0.01	0.85
Wetlands-Mixed --> WETL	15.1009	37.3150	0.00	0.18
TPSS, SR319 Pasture --> TPSS	10.2781	25.3977	0.00	0.12
TPHH, SR319 Pasture --> TPHH	0.3162	0.7815	0.00	0.00
Forest-Deciduous --> FRSD	692.4264	1711.0203	0.07	8.37
Forest-Evergreen --> FRSE	1713.6724	4234.5702	0.18	20.73
Forest-Mixed --> FRST	1007.3310	2489.1653	0.11	12.18
TPVH, SR319 Pasture --> TPVH	1.1859	2.9305	0.00	0.01
Residential-Low Density --> URLD	1124.5012	2778.6986	0.12	13.60
Residential-Medium Density --> URMD	186.7448	461.4558	0.02	2.26

SOIL:

Estes	717.2519	1772.3654	0.08	8.68
Marietta	529.8746	1309.3467	0.06	6.41
Wrightsville	2247.8954	5554.6620	0.24	27.19
Briley	32.8108	81.0771	0.00	0.40
Pits	10.3571	25.5930	0.00	0.13

Table 9-23

Kullit	985.0355	2434.0720	0.11	11.91
Water	31.9411	78.9281	0.00	0.39
Kirvin	224.8528	555.6225	0.02	2.72
Lilbert	245.6461	607.0039	0.03	2.97
Sacul	785.6407	1941.3575	0.08	9.50
Latch	76.5322	189.1148	0.01	0.93
Thage	37.8708	93.5806	0.00	0.46
Cart	1763.2444	4357.0650	0.19	21.33
Elrose	36.3686	89.8686	0.00	0.44
Bowie	492.7154	1217.5244	0.05	5.96
Iuka	49.9673	123.4717	0.01	0.60
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		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	21	12916.5488	31917.4379	1.38
LANDUSE:				
Residential-High Density --> URHD	23.4974	58.0633	0.00	0.18
Range-Brush --> RNGB	1429.1505	3531.5023	0.15	11.06
SR319 - Poultry Headquarters --> TBHQ	23.1810	57.2813	0.00	0.18
Pasture --> PAST	2618.9752	6471.6187	0.28	20.28
TPLH, SR319 Pastureland --> TPLH	74.2108	183.3785	0.01	0.57
Water --> WATR	129.6710	320.4236	0.01	1.00
Wetlands-Forested --> WETF	1829.8728	4521.7071	0.20	14.17
SR319 Pasture, no litter --> TBPA	107.0439	264.5108	0.01	0.83
Wetlands-Mixed --> WETL	6.3293	15.6400	0.00	0.05
TPMV, SR319 Pasture --> TPMV	39.6371	97.9452	0.00	0.31
TPHH, SR319 Pasture --> TPHH	2.9273	7.2335	0.00	0.02
Forest-Deciduous --> FRSD	1102.6390	2724.6760	0.12	8.54
Forest-Evergreen --> FRSE	2399.3494	5928.9122	0.26	18.58
TPHM, SR319 Pasture --> TPHM	42.6435	105.3742	0.00	0.33
TPHV, SR319 Pasture --> TPHV	15.6650	38.7089	0.00	0.12
Forest-Mixed --> FRST	1655.5803	4091.0218	0.18	12.82
Residential-Low Density --> URLD	1188.7171	2937.3794	0.13	9.20
TPVH, SR319 Pasture --> TPVH	2.3735	5.8650	0.00	0.02
TPVM, SR319 Pasture --> TPVM	45.8081	113.1942	0.00	0.35
Agricultural Land-Row Crops --> AGRR	47.7860	118.0817	0.01	0.37
Residential-Medium Density --> URMD	83.1509	205.4699	0.01	0.64
SR 319 Hayland - no litter --> TBHA	43.7511	108.1112	0.00	0.34
SR Grass Establishment --> TBAP	4.5887	11.3390	0.00	0.04

SOIL:

Table 9-24

Mantachie	179.5141	443.5883	0.02	1.39
Estes	702.9452	1737.0127	0.08	5.44
Nahatche	1038.6342	2566.5170	0.11	8.04
Marietta	240.1169	593.3409	0.03	1.86
Bonn	61.7896	152.6851	0.01	0.48
Wrightsville	1231.9144	3044.1221	0.13	9.54
Briley	47.8651	118.2772	0.01	0.37
Pits	1.5032	3.7145	0.00	0.01
Kullit	1839.3667	4545.1670	0.20	14.24
Water	111.8700	276.4362	0.01	0.87
Kirvin	453.5717	1120.7984	0.05	3.51
Lilbert	356.4965	880.9206	0.04	2.76
Sacul	2036.6819	5032.7427	0.22	15.77
Latch	1132.2283	2797.7928	0.12	8.77
Thage	116.2213	287.1887	0.01	0.90
Cart	1717.6072	4244.2934	0.18	13.30
Cuthbert	70.2550	173.6035	0.01	0.54
Tenaha	8.6236	21.3094	0.00	0.07
Elrose	20.6493	51.0254	0.00	0.16
Darco	15.1111	37.3404	0.00	0.12
Bowie	1338.4045	3307.2644	0.14	10.36
Iuka	195.1790	482.2972	0.02	1.51

SUBBASIN #	22	Area [ha]	Area [acres] %Wat.Area %Sub.Area		
			Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	22	2160.1500	5337.8387	0.23	
LANDUSE:					
Range-Brush --> RNGB	226.9723	560.8599	0.02	10.51	
Pasture --> PAST	173.6089	428.9963	0.02	8.04	
Water --> WATR	52.3356	129.3240	0.01	2.42	
Wetlands-Forested --> WETF	508.0985	1255.5369	0.05	23.52	
Wetlands-Mixed --> WETL	1.0277	2.5396	0.00	0.05	
Forest-Deciduous --> FRSD	77.2386	190.8604	0.01	3.58	
Forest-Evergreen --> FRSE	690.2456	1705.6313	0.07	31.95	
Forest-Mixed --> FRST	364.1360	899.7982	0.04	16.86	
Residential-Low Density --> URLD	66.3287	163.9016	0.01	3.07	
Residential-Medium Density --> URMD	0.1581	0.3907	0.00	0.01	
SOIL:					
Mantachie	65.1429	160.9713	0.01	3.02	

Table 9-25

Estes	456.0000	1126.7989	0.05	21.11
Marietta	26.5631	65.6388	0.00	1.23
Wrightsville	17.7087	43.7592	0.00	0.82
Pits	3.3994	8.4002	0.00	0.16
Kullit	65.0638	160.7759	0.01	3.01
Water	42.2954	104.5141	0.00	1.96
Kirvin	35.8128	88.4951	0.00	1.66
Lilbert	86.5673	213.9121	0.01	4.01
Sacul	671.5881	1659.5279	0.07	31.09
Thage	38.6588	95.5279	0.00	1.79
Cart	196.5354	485.6488	0.02	9.10
Cuthbert	227.9210	563.2041	0.02	10.55
Elrose	3.0832	7.6188	0.00	0.14
Bowie	223.8100	553.0457	0.02	10.36
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	23	12646.2536	31249.5250	1.35
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LANDUSE:				
Range-Brush --> RNGB	1519.0778	3753.7172	0.16	12.01
SR319 - Poultry Headquarters --> TBHQ	7.9847	19.7307	0.00	0.06
Pasture --> PAST	1532.8337	3787.7087	0.16	12.12
Water --> WATR	53.1262	131.2775	0.01	0.42
Wetlands-Forested --> WETF	1539.5535	3804.3138	0.16	12.17
SR319 Pasture, no litter --> TBPA	311.4841	769.6927	0.03	2.46
Wetlands-Mixed --> WETL	2.0555	5.0792	0.00	0.02
TPMH, SR319 Pasture --> TPMH	18.5784	45.9081	0.00	0.15
Forest-Deciduous --> FRSD	554.3468	1369.8186	0.06	4.38
Forest-Evergreen --> FRSE	4157.9962	10274.6166	0.44	32.88
Forest-Mixed --> FRST	2382.3789	5886.9773	0.25	18.84
Residential-Low Density --> URLD	541.8558	1338.9528	0.06	4.28
Residential-Medium Density --> URMD	1.2649	3.1257	0.00	0.01
SR 319 Hayland - no litter --> TBHA	2.8460	7.0327	0.00	0.02
SR Grass Establishment --> TBAP	20.8710	51.5733	0.00	0.17
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SOIL:				
Mantachie	1705.2567	4213.7747	0.18	13.48
Nahatche	128.0721	316.4726	0.01	1.01
Marietta	364.1360	899.7982	0.04	2.88
Wrightsville	1116.7574	2759.5633	0.12	8.83
Briley	27.5118	67.9830	0.00	0.22

Table 9-26

Pits	41.9792	103.7327	0.00	0.33
Kullit	168.2330	415.7122	0.02	1.33
Water	59.4508	146.9058	0.01	0.47
Kirvin	617.3551	1525.5154	0.07	4.88
Lilbert	216.9321	536.0500	0.02	1.72
Sacul	3278.2513	8100.7230	0.35	25.92
Thage	114.0000	281.6997	0.01	0.90
Cart	2801.6175	6922.9368	0.30	22.15
Cuthbert	361.6061	893.5468	0.04	2.86
Elrose	46.7226	115.4539	0.00	0.37
Bowie	1543.5854	3814.2768	0.17	12.21
Iuka	54.7864	135.3800	0.01	0.43
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SUBBASIN #	24	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:		18357.7968	45363.0338	1.96
SR319 - Poultry Headquarters --> TBHQ	2806.7072	6935.5137	0.30	15.29
Pasture --> PAST	6.5664	16.2259	0.00	0.04
Range-Grasses --> RNGE	2466.2821	6094.3063	0.26	13.43
Water --> WATR	0.8702	2.1504	0.00	0.00
Wetlands-Forested --> WETF	27.0568	66.8587	0.00	0.15
SR319 Pasture, no litter --> TBPA	1526.8892	3773.0196	0.16	8.32
Wetlands-Mixed --> WETL	232.5144	574.5546	0.02	1.27
TPMM, SR319 Pasture --> TPMM	68.6705	169.6881	0.01	0.37
Forest-Deciduous --> FRSD	17.9587	44.3770	0.00	0.10
Forest-Evergreen --> FRSE	1805.2894	4460.9603	0.19	9.83
Forest-Mixed --> FRST	5208.3536	12870.1021	0.56	28.37
Residential-Low Density --> URLD	3476.0859	8589.5821	0.37	18.94
Residential-Medium Density --> URMD	659.0149	1628.4587	0.07	3.59
SR 319 Hayland - no litter --> TBHA	1.5823	3.9099	0.00	0.01
SR Grass Establishment --> TBAP	25.4745	62.9488	0.00	0.14
	28.4808	70.3776	0.00	0.16
SOIL:				
Mantachie	1444.5321	3569.5111	0.15	7.87
Ruston	6.2500	15.4440	0.00	0.03
Marietta	370.4091	915.2994	0.04	2.02
Bonn	36.8669	91.0999	0.00	0.20
Keithville	1197.7773	2959.7677	0.13	6.52
Wrightsville	771.0395	1905.2771	0.08	4.20

Table 9-27

Briley	85.6007	211.5237	0.01	0.47
Pits	13.9240	34.4068	0.00	0.08
Larue	2.9272	7.2332	0.00	0.02
Kullit	3069.1264	7583.9648	0.33	16.72
Cahaba	41.5346	102.6340	0.00	0.23
Guyton	443.5890	1096.1306	0.05	2.42
Water	23.1802	57.2795	0.00	0.13
Kirvin	251.8180	622.2550	0.03	1.37
Lilbert	107.4360	265.4798	0.01	0.59
Sacul	2179.2585	5385.0568	0.23	11.87
Latch	35.3637	87.3855	0.00	0.19
Cart	1907.7413	4714.1240	0.20	10.39
Eastwood	1063.0472	2626.8427	0.11	5.79
Cuthbert	317.7986	785.2964	0.03	1.73
Elrose	8.2278	20.3313	0.00	0.04
Bowie	4386.2859	10838.7318	0.47	23.89
Gallion	0.0791	0.1955	0.00	0.00
NACOGDOCHES	5.7753	14.2710	0.00	0.03
Metcalf	412.2601	1018.7153	0.04	2.25
Iuka	73.1008	180.6358	0.01	0.40
Meth	102.8475	254.1412	0.01	0.56

SUBBASIN #	25	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area	
		3924.2248	9696.9557	0.42		
LANDUSE:						
SR319 - Poultry Headquarters --> TBHQ	558.8968	1381.0620	0.06	14.24		
Pasture --> PAST	16.1403	39.8834	0.00	0.41		
Water --> WATR	547.8202	1353.6910	0.06	13.96		
Wetlands-Forested --> WETF	13.6085	33.6272	0.00	0.35		
SR319 Pasture, no litter --> TBPA	684.4587	1691.3318	0.07	17.44		
Wetlands-Mixed --> WETL	11.5514	28.5440	0.00	0.29		
TPMH, SR319 Pasture --> TPMH	5.9339	14.6630	0.00	0.15		
TPHH, SR319 Pasture --> TPHH	36.0783	89.1512	0.00	0.92		
Forest-Deciduous --> FRSD	27.5334	68.0365	0.00	0.70		
Forest-Evergreen --> FRSE	273.3563	675.4770	0.03	6.97		
TPHM, SR319 Pasture --> TPHM	871.7335	2154.0970	0.09	22.21		
Forest-Mixed --> FRST	7.0416	17.4001	0.00	0.18		
Residential-Low Density --> URLD	688.6520	1701.6936	0.07	17.55		
TPVH, SR319 Pasture --> TPVH	169.7103	419.3627	0.02	4.32		
	1.2659	3.1281	0.00	0.03		

Table 9-28

Residential-Medium Density --> URMD	1.8197	4.4967	0.00	0.05
SR 319 Hayland - no litter --> TBHA	8.6240	21.3103	0.00	0.22

SOIL:

Mantachie	69.9412	172.8283	0.01	1.78
Nahatche	782.0916	1932.5875	0.08	19.93
Kullit	96.9999	239.6917	0.01	2.47
Kirvin	14.7161	36.3643	0.00	0.38
Water	6.8042	16.8136	0.00	0.17
Lilbert	81.9673	202.5453	0.01	2.09
Sacul	1406.1034	3474.5518	0.15	35.83
Thage	3.8768	9.5798	0.00	0.10
Cart	191.5472	473.3226	0.02	4.88
Cuthbert	79.1981	195.7026	0.01	2.02
Darco	4.1142	10.1664	0.00	0.10
Bowie	957.0238	2364.8536	0.10	24.39
Iuka	229.8408	567.9481	0.02	5.86

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	26	12585.5376	31099.4927	1.35	

LANDUSE:

Range-Brush --> RNGB	1195.9083	2955.1492	0.13	9.50
SR319 - Poultry Headquarters --> TBHQ	21.5828	53.3322	0.00	0.17
Pasture --> PAST	1436.4814	3549.6173	0.15	11.41
Range-Grasses --> RNGE	0.2372	0.5861	0.00	0.00
Water --> WATR	27.6703	68.3746	0.00	0.22
Wetlands-Forested --> WETF	935.5708	2311.8421	0.10	7.43
SR319 Pasture, no litter --> TBPA	91.3909	225.8315	0.01	0.73
Wetlands-Mixed --> WETL	2.1346	5.2746	0.00	0.02
TPMH, SR319 Pasture --> TPMH	3.9529	9.7678	0.00	0.03
TPMM, SR319 Pasture --> TPMM	3.9529	9.7678	0.00	0.03
TPSS, SR319 Pasture --> TPSS	15.8906	39.2665	0.00	0.13
TPHH, SR319 Pasture --> TPHH	40.8729	100.9990	0.00	0.32
Forest-Deciduous --> FRSD	1231.9587	3044.2315	0.13	9.79
Forest-Evergreen --> FRSE	3997.7190	9878.5636	0.43	31.76
Forest-Mixed --> FRST	3088.4745	7631.7750	0.33	24.54
Residential-Low Density --> URLD	415.3700	1026.4001	0.04	3.30
TPVH, SR319 Pasture --> TPVH	25.5357	63.1000	0.00	0.20
Agricultural Land-Row Crops --> AGRR	13.9932	34.5780	0.00	0.11
SR 319 Hayland - no litter --> TBHA	5.3759	13.2842	0.00	0.04

Table 9-29

SR Grass Establishment --> TBAP	31.4650	77.7517	0.00	0.25
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SOIL:

LANEVILLE	391.4155	967.2072	0.04	3.11
Nahatche	1541.3912	3808.8547	0.16	12.25
RENTZEL	57.7913	142.8052	0.01	0.46
Marietta	38.0268	93.9662	0.00	0.30
DREKA	193.7708	478.8174	0.02	1.54
ALAZAN	16.6022	41.0247	0.00	0.13
BERNALDO	9.4079	23.2474	0.00	0.07
Briley	46.0117	113.6972	0.00	0.37
Pits	12.9655	32.0384	0.00	0.10
Kullit	144.3597	356.7199	0.02	1.15
Kirvin	234.4856	579.4257	0.03	1.86
Water	12.8864	31.8430	0.00	0.10
SAWTOWN	39.0546	96.5058	0.00	0.31
LILBERT	897.0696	2216.7038	0.10	7.13
Sacul	2272.9926	5616.6785	0.24	18.06
Thage	16.6022	41.0247	0.00	0.13
Cart	317.8126	785.3309	0.03	2.53
Tenaha	428.9680	1060.0013	0.05	3.41
Cuthbert	1306.0359	3227.2800	0.14	10.38
EASTWOOD	657.4452	1624.5800	0.07	5.22
Darco	891.4565	2202.8335	0.10	7.08
Bowie	1148.5526	2838.1310	0.12	9.13
LATEX	62.6138	154.7219	0.01	0.50
Iuka	64.5112	159.4104	0.01	0.51
METCALF	991.7018	2450.5448	0.11	7.88
MABEN	473.3194	1169.5960	0.05	3.76
METH	11.7006	28.9127	0.00	0.09
Tonkawa	101.2731	250.2510	0.01	0.80
GALLIME	8.5382	21.0984	0.00	0.07
OWENTOWN	18.9739	46.8854	0.00	0.15
IULUS	42.9284	106.0783	0.00	0.34
BETIS	76.0537	187.9324	0.01	0.60
BESNER	58.8191	145.3448	0.01	0.47

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	27	15096.7008	37304.7025	1.61

LANDUSE:

Table 9-30

	Range-Brush --> RNGB	1804.1386	4458.1167	0.19	11.95
SR319 - Poultry Headquarters --> TBHQ	Pasture --> PAST	50.9300	125.8505	0.01	0.34
	Range-Grasses --> RNGE	1788.7963	4420.2052	0.19	11.85
	Water --> WATR	1.0281	2.5405	0.00	0.01
	Wetlands-Forested --> WETF	179.2039	442.8217	0.02	1.19
SR319 Pasture, no litter --> TBPA	Wetlands-Mixed --> WETL	3025.5087	7476.1833	0.32	20.04
	TPMH, SR319 Pasture --> TPMH	113.4852	280.4277	0.01	0.75
	TPMM, SR319 Pasture --> TPMM	16.3703	40.4519	0.00	0.11
	TPSS, SR319 Pasture --> TPSS	9.0156	22.2779	0.00	0.06
	TPMV, SR319 Pasture --> TPMV	43.5752	107.6764	0.00	0.29
	TPHH, SR319 Pasture --> TPHH	16.2913	40.2565	0.00	0.11
	Forest-Deciduous --> FRSD	23.3297	57.6489	0.00	0.15
	Forest-Evergreen --> FRSE	14.8678	36.7390	0.00	0.10
	TPHM, SR319 Pasture --> TPHM	1176.7669	2907.8497	0.13	7.79
	Forest-Mixed --> FRST	3389.3732	8375.3107	0.36	22.45
Residential-Low Density --> URLD	TPVH, SR319 Pasture --> TPVH	58.2057	143.8291	0.01	0.39
	TPVM, SR319 Pasture --> TPVM	2720.1662	6721.6666	0.29	18.02
Agricultural Land-Row Crops --> AGRR	Residential-Medium Density --> URMD	485.1000	1198.7063	0.05	3.21
SR 319 Hayland - no litter --> TBHA	TPVH, SR319 Pasture --> TPVH	9.0946	22.4733	0.00	0.06
	TPVM, SR319 Pasture --> TPVM	116.9649	289.0262	0.01	0.77
	SR Grass Establishment --> TBAP	9.2528	22.8641	0.00	0.06
	SR 319 Hayland - no litter --> TBHA	1.0281	2.5405	0.00	0.01
	SR Grass Establishment --> TBAP	40.4118	99.8596	0.00	0.27
		3.7960	9.3802	0.00	0.03

SOIL:

Mantachie	971.6235	2400.9302	0.10	6.44
Estes	1629.2052	4025.8476	0.17	10.79
Nahatche	1262.1773	3118.9033	0.13	8.36
Marietta	139.3456	344.3301	0.01	0.92
DREKA	11.0717	27.3588	0.00	0.07
Bonn	100.3573	247.9880	0.01	0.66
Wrightsville	745.7602	1842.8107	0.08	4.94
Briley	74.2597	183.4994	0.01	0.49
Pits	5.0614	12.5069	0.00	0.03
Kullit	311.0366	768.5869	0.03	2.06
Water	102.5717	253.4598	0.01	0.68
Kirvin	343.3027	848.3183	0.04	2.27
Lilbert	663.7503	1640.1601	0.07	4.40
Sacul	3742.2451	9247.2748	0.40	24.79
Latch	415.5063	1026.7367	0.04	2.75
Thage	159.8283	394.9438	0.02	1.06
Cart	1843.6014	4555.6312	0.20	12.21

Table 9-31

Tenaha	1.8980	4.6901	0.00	0.01
Cuthbert	285.1762	704.6846	0.03	1.89
Elrose	74.0224	182.9131	0.01	0.49
EASTWOOD	94.8215	234.3086	0.01	0.63
Darco	66.1931	163.5665	0.01	0.44
Bowie	1467.2416	3625.6274	0.16	9.72
LATEX	23.0925	57.0626	0.00	0.15
Iuka	493.4829	1219.4209	0.05	3.27
METCALF	44.6823	110.4123	0.00	0.30
METH	25.3859	62.7298	0.00	0.17
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		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	28	5989.2696	14799.7846	0.64
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LANDUSE:				
Range-Brush --> RNGB	500.3908	1236.4906	0.05	8.35
SR319 - Poultry Headquarters --> TBHQ	8.7774	21.6894	0.00	0.15
Pasture --> PAST	363.3527	897.8626	0.04	6.07
Water --> WATR	43.9661	108.6424	0.00	0.73
Wetlands-Forested --> WETF	1991.1251	4920.1698	0.21	33.24
SR319 Pasture, no litter --> TBPA	21.2714	52.5626	0.00	0.36
Wetlands-Mixed --> WETL	2.7676	6.8390	0.00	0.05
TPMH, SR319 Pasture --> TPMH	6.0098	14.8504	0.00	0.10
TPSS, SR319 Pasture --> TPSS	12.5730	31.0686	0.00	0.21
Forest-Deciduous --> FRSD	229.4776	567.0505	0.02	3.83
Forest-Evergreen --> FRSE	1772.4809	4379.8890	0.19	29.59
TPHM, SR319 Pasture --> TPHM	4.1119	10.1608	0.00	0.07
Forest-Mixed --> FRST	792.0218	1957.1255	0.08	13.22
Residential-Low Density --> URLD	236.2781	583.8549	0.03	3.95
TPVM, SR319 Pasture --> TPVM	4.1910	10.3562	0.00	0.07
Residential-Medium Density --> URMD	0.4745	1.1724	0.00	0.01
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SOIL:				
Estes	2025.8393	5005.9503	0.22	33.82
Marietta	52.6644	130.1363	0.01	0.88
Wrightsville	1302.0598	3217.4549	0.14	21.74
Briley	18.1874	44.9420	0.00	0.30
Pits	0.6326	1.5632	0.00	0.01
Kullit	12.4149	30.6778	0.00	0.21
Water	35.4259	87.5392	0.00	0.59
Kirvin	24.6716	60.9648	0.00	0.41

Table 9-32

Lilbert	32.1838	79.5278	0.00	0.54
Sacul	428.6692	1059.2629	0.05	7.16
Latch	728.3659	1799.8286	0.08	12.16
Cart	1176.5668	2907.3553	0.13	19.64
Bowie	103.1937	254.9969	0.01	1.72
Iuka	48.3943	119.5847	0.01	0.81
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SUBBASIN #	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
29	10442.7800	25804.6315	1.12	
LANDUSE:				
Range-Brush --> RNGB	1183.3100	2924.0182	0.13	11.33
Pasture --> PAST	2222.6302	5492.2304	0.24	21.28
Water --> WATR	26.3309	65.0650	0.00	0.25
Wetlands-Forested --> WETF	2844.7674	7029.5625	0.30	27.24
Wetlands-Mixed --> WETL	11.5445	28.5270	0.00	0.11
Forest-Deciduous --> FRSD	116.7100	288.3963	0.01	1.12
Forest-Evergreen --> FRSE	2741.4205	6774.1872	0.29	26.25
Forest-Mixed --> FRST	1052.4461	2600.6470	0.11	10.08
Residential-Low Density --> URLD	236.8201	585.1944	0.03	2.27
Agricultural Land-Row Crops --> AGRR	6.6420	16.4128	0.00	0.06
Residential-Medium Density --> URMD	0.1581	0.3908	0.00	0.00
SOIL:				
Ruston	6.1676	15.2405	0.00	0.06
Bonn	133.3942	329.6237	0.01	1.28
Wrightsville	11.4654	28.3316	0.00	0.11
Keithville	2827.0553	6985.7950	0.30	27.07
Larue	3.0047	7.4248	0.00	0.03
KULLIT	1382.4129	3416.0114	0.15	13.24
Cahaba	233.7363	577.5742	0.02	2.24
Kirvin	128.5708	317.7049	0.01	1.23
Water	22.3773	55.2955	0.00	0.21
Guyton	1921.9200	4749.1605	0.21	18.40
Eastwood	1268.9448	3135.6261	0.14	12.15
Bowie	716.4699	1770.4329	0.08	6.86
NACOGDOCHES	14.3911	35.5611	0.00	0.14
Bienville	22.7727	56.2725	0.00	0.22
Metcalf	1325.8765	3276.3072	0.14	12.70
Meth	424.2204	1048.2698	0.05	4.06

Table 9-33

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	30	12136.0992	29988.9079	1.30		
LANDUSE:						
Residential-High Density --> URHD		0.3954	0.9770	0.00	0.00	
Range-Brush --> RNGB		1269.6597	3137.3925	0.14	10.46	
Pasture --> PAST		3034.2620	7497.8132	0.32	25.00	
Range-Grasses --> RNGE		0.4745	1.1724	0.00	0.00	
Water --> WATR		18.8994	46.7013	0.00	0.16	
Wetlands-Forested --> WETF		3575.3857	8834.9568	0.38	29.46	
Wetlands-Mixed --> WETL		12.4942	30.8737	0.00	0.10	
Forest-Deciduous --> FRSD		142.2595	351.5302	0.02	1.17	
Forest-Evergreen --> FRSE		2760.5767	6821.5230	0.30	22.75	
Forest-Mixed --> FRST		894.9140	2211.3771	0.10	7.37	
Residential-Low Density --> URLD		346.6734	856.6473	0.04	2.86	
Agricultural Land-Row Crops --> AGRR		69.1133	170.7823	0.01	0.57	
Residential-Medium Density --> URMD		10.9917	27.1610	0.00	0.09	
SOIL:						
Ruston		18.6622	46.1151	0.00	0.15	
Wrightsville		4.1120	10.1610	0.00	0.03	
Bonn		31.1563	76.9888	0.00	0.26	
Keithville		4309.3780	10648.6885	0.46	35.51	
Larue		10.6754	26.3794	0.00	0.09	
Cahaba		96.0785	237.4148	0.01	0.79	
Kirvin		191.0499	472.0939	0.02	1.57	
Water		32.1052	79.3337	0.00	0.26	
Guyton		1694.5402	4187.2935	0.18	13.96	
Beauregard		62.7871	155.1501	0.01	0.52	
Eastwood		2076.9564	5132.2630	0.22	17.11	
Bowie		1145.6670	2831.0004	0.12	9.44	
Yorktown		5.6935	14.0690	0.00	0.05	
Metcalf		2237.3244	5528.5405	0.24	18.44	
Meth		219.9130	543.4161	0.02	1.81	
SUBBASIN #	31	3054.3622	7547.4817	0.33		

Table 9-34

LANDUSE:

Range-Brush --> RNGB	517.8698	1279.6823	0.06	16.96
Pasture --> PAST	185.6724	458.8057	0.02	6.08
Water --> WATR	2.6151	6.4621	0.00	0.09
Wetlands-Forested --> WETF	663.3647	1639.2074	0.07	21.72
SR319 Pasture, no litter --> TBPA	36.3737	89.8813	0.00	1.19
Forest-Deciduous --> FRSD	257.1519	635.4352	0.03	8.42
Forest-Evergreen --> FRSE	825.4219	2039.6588	0.09	27.02
Forest-Mixed --> FRST	434.6620	1074.0715	0.05	14.23
Residential-Low Density --> URLD	128.3778	317.2280	0.01	4.20
SR 319 Hayland - no litter --> TBHA	2.8528	7.0495	0.00	0.09

SOIL:

Mantachie	230.7631	570.2272	0.02	7.56
Estes	466.2017	1152.0078	0.05	15.26
Nahatche	21.7925	53.8504	0.00	0.71
Marietta	115.5400	285.5052	0.01	3.78
Wrightsville	769.9500	1902.5850	0.08	25.21
Briley	73.9361	182.6999	0.01	2.42
Kullit	27.5775	68.1453	0.00	0.90
Water	0.5547	1.3707	0.00	0.02
Kirvin	89.3098	220.6889	0.01	2.92
Lilbert	170.5365	421.4042	0.02	5.58
Sacul	143.1175	353.6505	0.02	4.69
Thage	6.0227	14.8823	0.00	0.20
Latch	18.0680	44.6469	0.00	0.59
Cart	637.0552	1574.1952	0.07	20.86
Cuthbert	128.9326	318.5988	0.01	4.22
Tenaha	55.7096	137.6613	0.01	1.82
Bowie	99.2947	245.3622	0.01	3.25

SUBBASIN #	32	Area [ha]	Area [acres]	
			%Wat.	%Sub.Area
		2394.3164	5916.4755	0.26
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LANDUSE:				
SR319 - Poultry Headquarters --> TBHQ		253.8707	627.3272	0.03 10.60
Pasture --> PAST		8.4703	20.9305	0.00 0.35
Water --> WATR		369.6838	913.5073	0.04 15.44
Wetlands-Forested --> WETF		19.3154	47.7293	0.00 0.81
SR319 Pasture, no litter --> TBPA		302.8716	748.4109	0.03 12.65
		8.1536	20.1480	0.00 0.34

Table 9-35

Wetlands-Mixed --> WETL	0.3958	0.9781	0.00	0.02
TPHH, SR319 Pasture --> TPHH	14.5657	35.9926	0.00	0.61
Forest-Deciduous --> FRSD	180.0131	444.8213	0.02	7.52
Forest-Evergreen --> FRSE	544.7098	1346.0050	0.06	22.75
Forest-Mixed --> FRST	597.8271	1477.2606	0.06	24.97
Residential-Low Density --> URLD	86.1276	212.8257	0.01	3.60
SR 319 Hayland - no litter --> TBHA	8.3119	20.5392	0.00	0.35

SOIL:

Mantachie	32.6937	80.7877	0.00	1.37
Estes	222.6811	550.2561	0.02	9.30
Nahatche	308.4921	762.2993	0.03	12.88
Wrightsville	5.6205	13.8884	0.00	0.23
Briley	26.9940	66.7036	0.00	1.13
Kullit	212.3901	524.8266	0.02	8.87
Water	11.2409	27.7769	0.00	0.47
Kirvin	71.8786	177.6155	0.01	3.00
Lilbert	104.6514	258.5988	0.01	4.37
Sacul	555.0799	1371.6302	0.06	23.18
Cart	143.0447	353.4706	0.02	5.97
Cuthbert	424.4635	1048.8707	0.05	17.73
Elrose	33.5644	82.9394	0.00	1.40
Darco	15.5156	38.3399	0.00	0.65
Bowie	214.2108	529.3256	0.02	8.95
Iuka	11.7951	29.1462	0.00	0.49

SUBBASIN #	33	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		237.3287	586.4511	0.03	

LANDUSE:

Water --> WATR	10.8275	26.7552	0.00	4.56
Wetlands-Forested --> WETF	172.9211	427.2968	0.02	72.86
Wetlands-Mixed --> WETL	0.3981	0.9836	0.00	0.17
Forest-Deciduous --> FRSD	2.8661	7.0823	0.00	1.21
Forest-Evergreen --> FRSE	13.9324	34.4277	0.00	5.87
Forest-Mixed --> FRST	30.3329	74.9540	0.00	12.78
Residential-Low Density --> URLD	6.0506	14.9515	0.00	2.55

SOIL:

Estes	162.8898	402.5089	0.02	68.63
Wrightsville	66.1591	163.4823	0.01	27.88

Table 9-36

	Water	8.2798	20.4599	0.00	3.49
<hr/>					
SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
<hr/>					
LANDUSE:	34	7319.1640	18086.0202	0.78	
Residential-High Density --> URHD		1.1071	2.7357	0.00	0.02
Range-Brush --> RNGB		556.9539	1376.2610	0.06	7.61
SR319 - Poultry Headquarters --> TBHQ		26.8078	66.2434	0.00	0.37
Pasture --> PAST		853.6586	2109.4332	0.09	11.66
Range-Grasses --> RNGE		0.5536	1.3679	0.00	0.01
TPLH, SR319 Pastureland --> TPLH		6.8008	16.8051	0.00	0.09
Water --> WATR		11.7828	29.1158	0.00	0.16
Wetlands-Forested --> WETF		438.4144	1083.3439	0.05	5.99
Wetlands-Mixed --> WETL		0.3954	0.9770	0.00	0.01
TPMH, SR319 Pasture --> TPMH		35.0320	86.5659	0.00	0.48
TPMV, SR319 Pasture --> TPMV		3.0841	7.6209	0.00	0.04
TPHH, SR319 Pasture --> TPHH		6.0100	14.8510	0.00	0.08
Forest-Deciduous --> FRSD		510.5345	1261.5563	0.05	6.98
Forest-Evergreen --> FRSE		2550.7747	6303.0919	0.27	34.85
TPHM, SR319 Pasture --> TPHM		9.0150	22.2766	0.00	0.12
Forest-Mixed --> FRST		1968.7527	4864.8864	0.21	26.90
Residential-Low Density --> URLD		333.7137	824.6233	0.04	4.56
Residential-Medium Density --> URMD		5.7728	14.2648	0.00	0.08
SOIL:					
Mantachie		0.2372	0.5862	0.00	0.00
LANEVILLE		6.0100	14.8510	0.00	0.08
Estes		156.7347	387.2994	0.02	2.14
Nahatche		651.6907	1610.3602	0.07	8.90
Marietta		48.0010	118.6129	0.01	0.66
DREKA		243.5636	601.8577	0.03	3.33
Wrightsville		1.9770	4.8852	0.00	0.03
ALAZAN		5.3774	13.2878	0.00	0.07
BONN		2.8468	7.0347	0.00	0.04
Briley		42.3864	104.7389	0.00	0.58
Kullit		302.7938	748.2186	0.03	4.14
Water		9.2523	22.8628	0.00	0.13
Kirvin		142.4214	351.9304	0.02	1.95
Lilbert		333.9509	825.2095	0.04	4.56
SAWTOWN		13.9970	34.5873	0.00	0.19

Table 9-37

Sacul	1776.9069	4390.8257	0.19	24.28
Cart	261.4354	646.0200	0.03	3.57
Elrose	2.5305	6.2531	0.00	0.03
TENAHA	21.8258	53.9327	0.00	0.30
Cuthbert	777.5055	1921.2549	0.08	10.62
EASTWOOD	813.2492	2009.5795	0.09	11.11
Darco	22.1421	54.7143	0.00	0.30
Bowie	331.1041	818.1748	0.04	4.52
LATEX	125.8148	310.8947	0.01	1.72
Iuka	52.3503	129.3603	0.01	0.72
METCALF	352.3764	870.7396	0.04	4.81
MABEN	773.6306	1911.6799	0.08	10.57
METH	47.0521	116.2680	0.01	0.64
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		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	35	2961.5494	7318.1366	0.32
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LANDUSE:				
Residential-High Density --> URHD	2.6103	6.4503	0.00	0.09
Range-Brush --> RNGB	322.5747	797.0983	0.03	10.89
Pasture --> PAST	618.2551	1527.7392	0.07	20.88
Range-Grasses --> RNGE	2.5312	6.2548	0.00	0.09
Water --> WATR	15.8202	39.0926	0.00	0.53
Wetlands-Forested --> WETF	800.7416	1978.6725	0.09	27.04
Wetlands-Mixed --> WETL	8.7011	21.5009	0.00	0.29
Forest-Deciduous --> FRSD	21.5946	53.3614	0.00	0.73
Forest-Evergreen --> FRSE	739.2799	1826.7977	0.08	24.96
Forest-Mixed --> FRST	265.2264	655.3876	0.03	8.96
Residential-Low Density --> URLD	159.1516	393.2717	0.02	5.37
Residential-Medium Density --> URMD	5.0625	12.5096	0.00	0.17
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SOIL:				
Ruston	201.6290	498.2353	0.02	6.81
Keithville	312.0543	771.1017	0.03	10.54
Larue	23.2558	57.4661	0.00	0.79
Cahaba	299.3981	739.8276	0.03	10.11
Kirvin	24.6005	60.7890	0.00	0.83
Water	32.8270	81.1172	0.00	1.11
Guyton	942.7283	2329.5286	0.10	31.83
Eastwood	399.9357	988.2612	0.04	13.50
Bowie	396.6926	980.2472	0.04	13.39

Table 9-38

Bienville	84.3219	208.3636	0.01	2.85
Metcalf	238.3320	588.9302	0.03	8.05
Meth	5.7744	14.2688	0.00	0.19
<hr/>				
SUBBASIN #	36	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
		20452.5664	50539.3142	2.19
<hr/>				
LANDUSE:				
Residential-High Density --> URHD	6.4827	16.0190	0.00	0.03
Range-Brush --> RNGB	1788.8199	4420.2633	0.19	8.75
Pasture --> PAST	5686.7980	14052.3623	0.61	27.80
Range-Grasses --> RNGE	8.3010	20.5121	0.00	0.04
Water --> WATR	89.8086	221.9216	0.01	0.44
Wetlands-Forested --> WETF	5360.2931	13245.5524	0.57	26.21
Wetlands-Mixed --> WETL	28.0652	69.3505	0.00	0.14
Forest-Deciduous --> FRSD	212.3468	524.7195	0.02	1.04
Forest-Evergreen --> FRSE	4530.1960	11194.3408	0.48	22.15
Forest-Mixed --> FRST	1781.6257	4402.4862	0.19	8.71
Residential-Low Density --> URLD	681.7865	1684.7285	0.07	3.33
Agricultural Land-Row Crops --> AGRR	199.9348	494.0490	0.02	0.98
Residential-Medium Density --> URMD	78.1082	193.0092	0.01	0.38
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SOIL:				
Ruston	293.0638	724.1754	0.03	1.43
Bonn	88.5437	218.7959	0.01	0.43
Keithville	4275.8700	10565.8886	0.46	20.91
Larue	151.6311	374.6880	0.02	0.74
Cahaba	547.6270	1353.2136	0.06	2.68
Water	161.9085	400.0839	0.02	0.79
Guyton	3635.9837	8984.6975	0.39	17.78
Kirvin	953.7421	2356.7445	0.10	4.66
Sacul	2.6879	6.6420	0.00	0.01
Beauregard	199.9348	494.0490	0.02	0.98
Eastwood	5682.6080	14042.0085	0.61	27.78
Bowie	1898.0765	4690.2418	0.20	9.28
Flo	4.7434	11.7212	0.00	0.02
Iuka	4.8225	11.9166	0.00	0.02
Bienville	88.3065	218.2098	0.01	0.43
Metcalf	1970.0182	4868.0135	0.21	9.63
Meth	492.9987	1218.2243	0.05	2.41

Table 9-39

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	37	2347.5148	5800.8264	0.25		
LANDUSE:						
Residential-High Density --> URHD		2.2932	5.6666	0.00	0.10	
Range-Brush --> RNGB		262.8470	649.5081	0.03	11.20	
Pasture --> PAST		664.7088	1642.5286	0.07	28.32	
Range-Grasses --> RNGE		1.8187	4.4942	0.00	0.08	
Water --> WATR		53.3760	131.8947	0.01	2.27	
Wetlands-Forested --> WETF		508.8509	1257.3961	0.05	21.68	
Wetlands-Mixed --> WETL		31.0767	76.7920	0.00	1.32	
TPMM, SR319 Pasture --> TPMM		0.1582	0.3908	0.00	0.01	
Forest-Deciduous --> FRSD		3.4002	8.4022	0.00	0.14	
Forest-Evergreen --> FRSE		190.0975	469.7405	0.02	8.10	
Forest-Mixed --> FRST		277.3178	685.2662	0.03	11.81	
Residential-Low Density --> URLD		342.3970	846.0801	0.04	14.59	
Residential-Medium Density --> URMD		9.1728	22.6663	0.00	0.39	
SOIL:						
Ruston		19.0572	47.0913	0.00	0.81	
HAINESVILLE		51.5572	127.4005	0.01	2.20	
ATTOYAC		50.9246	125.8373	0.01	2.17	
RENTZEL		8.2239	20.3216	0.00	0.35	
Keithville		21.5876	53.3441	0.00	0.92	
BERNALDO		2.5304	6.2528	0.00	0.11	
AUSTONIO		33.6862	83.2402	0.00	1.43	
Guyton		151.6668	374.7763	0.02	6.46	
Kirvin		50.6083	125.0557	0.01	2.16	
Water		85.7179	211.8131	0.01	3.65	
Cahaba		32.8163	81.0908	0.00	1.40	
SAWTOWN		2.9258	7.2298	0.00	0.12	
LILBERT		5.6934	14.0688	0.00	0.24	
TENAHA		62.3906	154.1702	0.01	2.66	
CUTHBERT		41.5146	102.5848	0.00	1.77	
Eastwood		277.8714	686.6340	0.03	11.84	
LATEX		159.0999	393.1439	0.02	6.78	
Bowie		154.1973	381.0291	0.02	6.57	
Bienville		58.7531	145.1819	0.01	2.50	
METCALF		965.2748	2385.2423	0.10	41.12	
MABEN		0.2372	0.5862	0.00	0.01	
METH		1.5815	3.9080	0.00	0.07	

Table 9-40

GALLIME	11.7823	29.1145	0.00	0.50
OWENTOWN	25.9368	64.0911	0.00	1.10
BESNER	71.8796	177.6182	0.01	3.06
<hr/>				
SUBBASIN #	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
38	242.7836	599.9304	0.03	
LANDUSE:				
Range-Brush --> RNGB	25.8027	63.7598	0.00	10.63
Pasture --> PAST	23.5003	58.0704	0.00	9.68
Water --> WATR	7.8599	19.4222	0.00	3.24
Wetlands-Forested --> WETF	63.2762	156.3586	0.01	26.06
Wetlands-Mixed --> WETL	7.3835	18.2451	0.00	3.04
Forest-Evergreen --> FRSE	84.3947	208.5435	0.01	34.76
Forest-Mixed --> FRST	28.8990	71.4109	0.00	11.90
Residential-Low Density --> URLD	1.6673	4.1199	0.00	0.69
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SOIL:				
Water	10.5593	26.0925	0.00	4.35
Cahaba	96.8594	239.3444	0.01	39.90
Guyton	59.6241	147.3341	0.01	24.56
Beauregard	11.0356	27.2696	0.00	4.55
Bowie	1.4291	3.5313	0.00	0.59
Bienville	40.8874	101.0347	0.00	16.84
Metcalf	22.3888	55.3239	0.00	9.22
<hr/>				
SUBBASIN #	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
39	5677.3112	14028.9198	0.61	
LANDUSE:				
Range-Brush --> RNGB	521.5608	1288.8028	0.06	9.19
SR319 - Poultry Headquarters --> TBHQ	10.8329	26.7686	0.00	0.19
Pasture --> PAST	1261.4402	3117.0818	0.13	22.22
Range-Grasses --> RNGE	5.2188	12.8958	0.00	0.09
TPLH, SR319 Pastureland --> TPLH	0.9489	2.3447	0.00	0.02
Water --> WATR	156.2468	386.0938	0.02	2.75
Wetlands-Forested --> WETF	1825.2256	4510.2238	0.20	32.15
Wetlands-Mixed --> WETL	211.7556	523.2586	0.02	3.73
TPMM, SR319 Pasture --> TPMM	16.2889	40.2507	0.00	0.29

Table 9-41

Forest-Deciduous	-->	FRSD	47.4434	117.2349	0.01	0.84
Forest-Evergreen	-->	FRSE	975.3567	2410.1551	0.10	17.18
Forest-Mixed	-->	FRST	420.5064	1039.0924	0.04	7.41
Residential-Low Density	-->	URLD	224.0118	553.5443	0.02	3.95
Residential-Medium Density	-->	URMD	0.4744	1.1723	0.00	0.01

SOIL:

LANEVILLE	121.1387	299.3399	0.01	2.13
Ruston	532.3937	1315.5715	0.06	9.38
HAINESVILLE	58.1181	143.6128	0.01	1.02
ATTOYAC	12.7306	31.4580	0.00	0.22
RENTZEL	31.7871	78.5474	0.00	0.56
DREKA	187.0850	462.2965	0.02	3.30
ALAZAN	4.9025	12.1143	0.00	0.09
Keithville	55.4297	136.9695	0.01	0.98
BERNALDO	47.0480	116.2580	0.01	0.83
Larue	45.7038	112.9363	0.00	0.81
AUSTONIO	4.8234	11.9189	0.00	0.08
Cahaba	164.0750	405.4375	0.02	2.89
Guyton	450.4748	1113.1458	0.05	7.93
Kirvin	41.5920	102.7760	0.00	0.73
Water	710.9389	1756.7657	0.08	12.52
SAWTOWN	34.3964	84.9953	0.00	0.61
LILBERT	194.5178	480.6633	0.02	3.43
Beauregard	171.3496	423.4135	0.02	3.02
TENAHA	165.1029	407.9776	0.02	2.91
CUTHBERT	17.1587	42.4000	0.00	0.30
Eastwood	461.8612	1141.2822	0.05	8.14
MOLLVILLE	13.5214	33.4120	0.00	0.24
DARCO	19.5309	48.2617	0.00	0.34
Bowie	146.9163	363.0376	0.02	2.59
LATEX	317.0008	783.3248	0.03	5.58
Bienville	140.3533	346.8200	0.02	2.47
Metcalf	714.4972	1765.5583	0.08	12.59
MABEN	395.0452	976.1763	0.04	6.96
METH	95.9938	237.2054	0.01	1.69
GALLIME	15.4191	38.1014	0.00	0.27
OWENTOWN	293.6745	725.6843	0.03	5.17
BESNER	12.7306	31.4580	0.00	0.22

Area [ha] Area [acres] %Wat.Area %Sub.Area

Table 9-42

SUBBASIN #	40	12560.7928	31038.3470	1.34
LANDUSE:				
Range-Brush --> RNGB	1457.1032	3600.5749	0.16	11.60
Pasture --> PAST	1643.6700	4061.5908	0.18	13.09
Range-Grasses --> RNGE	1.9772	4.8857	0.00	0.02
Water --> WATR	33.5330	82.8617	0.00	0.27
Wetlands-Forested --> WETF	3150.9145	7786.0673	0.34	25.09
Wetlands-Mixed --> WETL	68.0150	168.0685	0.01	0.54
Forest-Deciduous --> FRSD	141.7243	350.2079	0.02	1.13
Forest-Evergreen --> FRSE	4326.8626	10691.8939	0.46	34.45
Forest-Mixed --> FRST	1320.7568	3263.6561	0.14	10.51
Residential-Low Density --> URLD	414.7335	1024.8271	0.04	3.30
Residential-Medium Density --> URMD	1.5027	3.7131	0.00	0.01

SOIL:				
Ruston	544.5947	1345.7207	0.06	4.34
Keithville	1694.3649	4186.8604	0.18	13.49
Larue	215.9082	533.5198	0.02	1.72
Cahaba	168.8512	417.2399	0.02	1.34
Kirvin	1477.2705	3650.4092	0.16	11.76
Water	126.3814	312.2948	0.01	1.01
Guyton	415.0498	1025.6088	0.04	3.30
Sacul	2955.8854	7304.1406	0.32	23.53
Beauregard	283.3696	700.2204	0.03	2.26
Eastwood	2146.9021	5305.1024	0.23	17.09
Bowie	1044.9796	2582.1969	0.11	8.32
Iuka	859.9155	2124.8942	0.09	6.85
Metcalf	566.3437	1399.4636	0.06	4.51
Meth	60.9763	150.6754	0.01	0.49

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	41	24951.2176	61655.7063	2.67	
LANDUSE:					
Residential-High Density --> URHD	14.2340	35.1730	0.00	0.06	
Range-Brush --> RNGB	2602.2961	6430.4037	0.28	10.43	
SR319 - Poultry Headquarters --> TBHQ	156.6534	387.0983	0.02	0.63	
Pasture --> PAST	7157.8957	17687.5182	0.77	28.69	
Range-Grasses --> RNGE	10.9918	27.1614	0.00	0.04	
TPLH, SR319 Pastureland --> TPLH	57.3315	141.6690	0.01	0.23	

Table 9-43

Water --> WATR	106.6761	263.6020	0.01	0.43
Wetlands-Forested --> WETF	5738.7634	14180.7714	0.61	23.00
SR319 Pasture, no litter --> TBPA	73.6215	181.9225	0.01	0.30
Wetlands-Mixed --> WETL	21.8255	53.9319	0.00	0.09
TPMH, SR319 Pasture --> TPMH	69.2723	171.1752	0.01	0.28
TPMM, SR319 Pasture --> TPMM	55.7499	137.7609	0.01	0.22
TPSS, SR319 Pasture --> TPSS	57.0152	140.8874	0.01	0.23
TPMV, SR319 Pasture --> TPMV	81.4503	201.2676	0.01	0.33
TPHH, SR319 Pasture --> TPHH	32.1056	79.3346	0.00	0.13
Forest-Deciduous --> FRSD	411.4424	1016.6947	0.04	1.65
Forest-Evergreen --> FRSE	4725.7753	11677.6271	0.51	18.94
TPHM, SR319 Pasture --> TPHM	79.7896	197.1641	0.01	0.32
TPHV, SR319 Pasture --> TPHV	15.4202	38.1041	0.00	0.06
Forest-Mixed --> FRST	1791.1148	4425.9342	0.19	7.18
Residential-Low Density --> URLD	1437.0039	3550.9085	0.15	5.76
TPVH, SR319 Pasture --> TPVH	41.0414	101.4154	0.00	0.16
TPVL, SR319 Pasture --> TPVL	7.9078	19.5405	0.00	0.03
TPVM, SR319 Pasture --> TPVM	22.8535	56.4722	0.00	0.09
Agricultural Land-Row Crops --> AGRR	87.5393	216.3139	0.01	0.35
TPVV, SR319 Pasture --> TPVV	19.5322	48.2652	0.00	0.08
Residential-Medium Density --> URMD	63.4996	156.9106	0.01	0.25
SR 319 Hayland - no litter --> TBHA	12.4152	30.6787	0.00	0.05

SOIL:

LANEVILLE	3111.5578	7688.8150	0.33	12.47
HAINESVILLE	0.9489	2.3449	0.00	0.00
RENTZEL	26.6493	65.8516	0.00	0.11
DREKA	1267.2236	3131.3729	0.14	5.08
ALAZAN	362.1769	894.9571	0.04	1.45
BERNALDO	66.9790	165.5084	0.01	0.27
AUSTONIO	214.3012	529.5489	0.02	0.86
GUYTON	16.3691	40.4489	0.00	0.07
KIRVIN	232.5682	574.6875	0.02	0.93
WATER	60.5737	149.6806	0.01	0.24
SAWTOWN	198.0111	489.2953	0.02	0.79
LILBERT	252.2586	623.3435	0.03	1.01
SACUL	572.2869	1414.1495	0.06	2.29
TENAHA	83.2690	205.7620	0.01	0.33
CUTHBERT	889.5475	2198.1163	0.10	3.57
EASTWOOD	5511.0190	13618.0036	0.59	22.09
DARCO	3.6376	8.9887	0.00	0.01
MOLLVILLE	123.7569	305.8096	0.01	0.50
BOWIE	237.7873	587.5843	0.03	0.95

Table 9-44

LATEX	1476.6219	3648.8066	0.16	5.92
METCALF	6596.7588	16300.9209	0.71	26.44
MABEN	2703.5949	6680.7181	0.29	10.84
METH	489.7295	1210.1462	0.05	1.96
GALLIME	93.8655	231.9463	0.01	0.38
OWENTOWN	208.0540	514.1118	0.02	0.83
IULUS	134.1952	331.6031	0.01	0.54
BESNER	17.4762	43.1846	0.00	0.07
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SUBBASIN #	42	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:				
Residential-High Density --> URHD	0.9488	2.3446	0.00	0.02
Range-Brush --> RNGB	450.4570	1113.1017	0.05	8.05
SR319 - Poultry Headquarters --> TBHQ	70.4506	174.0870	0.01	1.26
Pasture --> PAST	1500.6535	3708.1899	0.16	26.82
Range-Grasses --> RNGE	1.0279	2.5400	0.00	0.02
TPLH, SR319 Pastureland --> TPLH	44.1997	109.2196	0.00	0.79
Water --> WATR	20.1626	49.8229	0.00	0.36
Wetlands-Forested --> WETF	1164.8468	2878.3947	0.12	20.82
TPLM, SR319 Pasture --> TPLM	15.2603	37.7091	0.00	0.27
SR319 Pasture, no litter --> TBPA	26.6463	65.8444	0.00	0.48
Wetlands-Mixed --> WETL	6.6418	16.4122	0.00	0.12
TPMH, SR319 Pasture --> TPMH	35.5021	87.7273	0.00	0.63
TPSS, SR319 Pasture --> TPSS	4.6651	11.5276	0.00	0.08
TPHH, SR319 Pasture --> TPHH	89.4272	220.9791	0.01	1.60
Forest-Deciduous --> FRSD	194.5892	480.8396	0.02	3.48
Forest-Evergreen --> FRSE	983.6994	2430.7704	0.11	17.58
TPHM, SR319 Pasture --> TPHM	18.1859	44.9383	0.00	0.32
Forest-Mixed --> FRST	558.0701	1379.0191	0.06	9.97
TPVH, SR319 Pasture --> TPVH	27.5161	67.9936	0.00	0.49
Residential-Low Density --> URLD	303.8628	750.8601	0.03	5.43
TPVM, SR319 Pasture --> TPVM	69.2646	171.1562	0.01	1.24
Residential-Medium Density --> URMD	10.0418	24.8137	0.00	0.18
SOIL:				
LANEVILLE	551.5074	1362.8023	0.06	9.86
ATTTOYAC	8.9348	22.0784	0.00	0.16
DREKA	353.1229	872.5842	0.04	6.31
ALAZAN	168.2592	415.7768	0.02	3.01

Table 9-45

BERNALDO	37.5578	92.8073	0.00	0.67
GUYTON	0.3163	0.7815	0.00	0.01
KIRVIN	90.2970	223.1283	0.01	1.61
WATER	14.5487	35.9506	0.00	0.26
SAWTOWN	60.2507	148.8825	0.01	1.08
LILBERT	19.3719	47.8690	0.00	0.35
SACUL	93.3807	230.7483	0.01	1.67
TENAHA	64.2042	158.6517	0.01	1.15
CUTHBERT	400.5644	989.8145	0.04	7.16
EASTWOOD	1392.0916	3439.9279	0.15	24.88
MOLLVILLE	15.8929	39.2722	0.00	0.28
BOWIE	11.9394	29.5030	0.00	0.21
LATEX	202.9705	501.5503	0.02	3.63
METCALF	1400.4729	3460.6386	0.15	25.03
MABEN	461.3685	1140.0647	0.05	8.24
METH	77.2506	190.8900	0.01	1.38
GALLIME	6.8790	16.9984	0.00	0.12
OWENTOWN	155.7662	384.9062	0.02	2.78
BESNER	9.1720	22.6645	0.00	0.16

SUBBASIN #	43	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
		19651.1664	48559.0147	2.10	
LANDUSE:					
Residential-High Density --> URHD		0.8697	2.1491	0.00	0.00
Range-Brush --> RNGB		1346.7902	3327.9859	0.14	6.85
SR319 - Poultry Headquarters --> TBHQ		176.8680	437.0497	0.02	0.90
Pasture --> PAST		3936.4794	9727.2374	0.42	20.03
Range-Grasses --> RNGE		0.2372	0.5861	0.00	0.00
TPLH, SR319 Pastureland --> TPLH		55.7407	137.7381	0.01	0.28
Water --> WATR		50.5224	124.8434	0.01	0.26
Wetlands-Forested --> WETF		5717.0983	14127.2357	0.61	29.09
SR319 Pasture, no litter --> TBPA		60.8799	150.4373	0.01	0.31
Wetlands-Mixed --> WETL		45.1460	111.5581	0.00	0.23
TPMH, SR319 Pasture --> TPMH		219.1677	541.5743	0.02	1.12
TPMM, SR319 Pasture --> TPMM		176.5517	436.2682	0.02	0.90
TPSS, SR319 Pasture --> TPSS		69.4189	171.5376	0.01	0.35
TPMV, SR319 Pasture --> TPMV		31.5469	77.9539	0.00	0.16
TPHH, SR319 Pasture --> TPHH		128.5594	317.6767	0.01	0.65
Forest-Deciduous --> FRSD		265.6578	656.4537	0.03	1.35
Forest-Evergreen --> FRSE		5018.8768	12401.8956	0.54	25.54

Table 9-46

TPHM, SR319 Pasture --> TPHM	29.0959	71.8973	0.00	0.15
TPHV, SR319 Pasture --> TPHV	10.9109	26.9615	0.00	0.06
Forest-Mixed --> FRST	1316.4293	3252.9626	0.14	6.70
Residential-Low Density --> URLD	714.1135	1764.6101	0.08	3.63
TPVH, SR319 Pasture --> TPVH	170.0684	420.2476	0.02	0.87
TPVM, SR319 Pasture --> TPVM	104.5237	258.2833	0.01	0.53
Residential-Medium Density --> URMD	5.6136	13.8715	0.00	0.03

SOIL:

LANEVILLE	1492.8229	3688.8401	0.16	7.60
HAINESVILLE	3.7160	9.1825	0.00	0.02
ATTOYAC	35.3420	87.3318	0.00	0.18
RENTZEL	92.4268	228.3912	0.01	0.47
DREKA	2299.1260	5681.2553	0.25	11.70
ALAZAN	505.8567	1249.9973	0.05	2.57
BERNALDO	167.3802	413.6049	0.02	0.85
AUSTONIO	161.6876	399.5381	0.02	0.82
GUYTON	4.7439	11.7224	0.00	0.02
KIRVIN	120.9692	298.9209	0.01	0.62
WATER	37.7139	93.1930	0.00	0.19
SAWTOWN	435.7262	1076.7013	0.05	2.22
LILBERT	275.0665	679.7031	0.03	1.40
SACUL	27.2774	67.4037	0.00	0.14
TENAHA	141.4470	349.5225	0.02	0.72
CUTHBERT	108.3979	267.8566	0.01	0.55
EASTWOOD	4611.7721	11395.9193	0.49	23.47
DARCO	4.9020	12.1131	0.00	0.02
MOLLVILLE	513.2888	1268.3624	0.05	2.61
BOWIE	220.1955	544.1142	0.02	1.12
LATEX	1047.2136	2587.7171	0.11	5.33
METCALF	3800.4088	9391.0003	0.41	19.34
MABEN	2221.2471	5488.8127	0.24	11.30
METH	487.1184	1203.6939	0.05	2.48
GALLIME	360.5356	890.9015	0.04	1.83
OWENTOWN	171.4125	423.5689	0.02	0.87
BETIS	34.9467	86.3549	0.00	0.18
IULUS	144.1352	356.1652	0.02	0.73
BESNER	124.2899	307.1266	0.01	0.63

Area [ha] Area [acres] %Wat.Area %Sub.Area

Table 9-47

SUBBASIN #	44	11592.5832	28645.8527	1.24
LANDUSE:				
Residential-High Density --> URHD	2.1349	5.2754	0.00	0.02
Range-Brush --> RNGB	570.0933	1408.7291	0.06	4.92
SR319 - Poultry Headquarters --> TBHQ	142.8001	352.8661	0.02	1.23
Pasture --> PAST	2875.3737	7105.1922	0.31	24.80
Range-Grasses --> RNGE	1.6605	4.1031	0.00	0.01
TPLH, SR319 Pastureland --> TPLH	56.2977	139.1144	0.01	0.49
Water --> WATR	20.1628	49.8233	0.00	0.17
Wetlands-Forested --> WETF	2606.3782	6440.4908	0.28	22.48
SR319 Pasture, no litter --> TBPA	276.1909	682.4814	0.03	2.38
Wetlands-Mixed --> WETL	21.9814	54.3172	0.00	0.19
TPMH, SR319 Pasture --> TPMH	54.8744	135.5975	0.01	0.47
TPMM, SR319 Pasture --> TPMM	118.7629	293.4690	0.01	1.02
TPSS, SR319 Pasture --> TPSS	10.9116	26.9632	0.00	0.09
TPMV, SR319 Pasture --> TPMV	35.5814	87.9235	0.00	0.31
TPHH, SR319 Pasture --> TPHH	22.7721	56.2710	0.00	0.20
Forest-Deciduous --> FRSD	40.0093	98.8650	0.00	0.35
Forest-Evergreen --> FRSE	3198.6902	7904.1233	0.34	27.59
TPHM, SR319 Pasture --> TPHM	24.1163	59.5926	0.00	0.21
Forest-Mixed --> FRST	900.7633	2225.8311	0.10	7.77
Residential-Low Density --> URLD	395.9025	978.2950	0.04	3.42
TPVH, SR319 Pasture --> TPVH	62.9396	155.5268	0.01	0.54
TPVM, SR319 Pasture --> TPVM	111.0931	274.5166	0.01	0.96
Agricultural Land-Row Crops --> AGRR	30.8372	76.2003	0.00	0.27
Residential-Medium Density --> URMD	4.1907	10.3554	0.00	0.04
SR 319 Hayland - no litter --> TBHA	8.0651	19.9293	0.00	0.07
SOIL:				
LANEVILLE	1045.6192	2583.7773	0.11	9.02
ATTOYAC	5.2186	12.8954	0.00	0.05
DREKA	1333.1170	3294.1988	0.14	11.50
ALAZAN	163.6745	404.4479	0.02	1.41
BERNALDO	159.3257	393.7017	0.02	1.37
AUSTONIO	133.7861	330.5922	0.01	1.15
GUYTON	16.9209	41.8125	0.00	0.15
KIRVIN	17.0000	42.0079	0.00	0.15
WATER	6.5628	16.2170	0.00	0.06
SAWTOWN	63.4931	156.8945	0.01	0.55
LILBERT	38.7442	95.7389	0.00	0.33
TENAHA	33.5256	82.8434	0.00	0.29
EASTWOOD	2771.2388	6847.8695	0.30	23.91

Table 9-48

MOLLVILLE	80.6512	199.2932	0.01	0.70
BOWIE	108.4838	268.0688	0.01	0.94
LATEX	1006.5587	2487.2569	0.11	8.68
METCALF	1903.2104	4702.9280	0.20	16.42
MABEN	1434.0892	3543.7060	0.15	12.37
METH	1013.7541	2505.0370	0.11	8.74
GALLIME	12.0977	29.8940	0.00	0.10
OWENTOWN	110.8559	273.9304	0.01	0.96
BESNER	1.1070	2.7354	0.00	0.01
IULUS	128.3303	317.1106	0.01	1.11
BETIS	5.2186	12.8954	0.00	0.05
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
	45	6531.2044	16138.9326	0.70
LANDUSE:				
Range-Brush --> RNGB	558.0982	1379.0887	0.06	8.55
Pasture --> PAST	600.0070	1482.6473	0.06	9.19
Range-Grasses --> RNGE	1.4233	3.5171	0.00	0.02
Water --> WATR	1171.8640	2895.7345	0.13	17.94
Wetlands-Forested --> WETF	1397.9341	3454.3650	0.15	21.40
Wetlands-Mixed --> WETL	1208.3958	2986.0064	0.13	18.50
Forest-Deciduous --> FRSD	20.7172	51.1931	0.00	0.32
Forest-Evergreen --> FRSE	1149.4072	2840.2427	0.12	17.60
Forest-Mixed --> FRST	301.3477	744.6454	0.03	4.61
Residential-Low Density --> URLD	122.0099	301.4925	0.01	1.87
SOIL:				
LANEVILLE	122.4843	302.6648	0.01	1.88
Ruston	459.0196	1134.2604	0.05	7.03
HAINESVILLE	168.1095	415.4070	0.02	2.57
RENTZEL	22.6149	55.8826	0.00	0.35
Elyrian	347.5265	858.7553	0.04	5.32
DREKA	363.1039	897.2478	0.04	5.56
ALAZAN	20.4799	50.6070	0.00	0.31
Bonn	4.4281	10.9420	0.00	0.07
Keithville	190.6453	471.0942	0.02	2.92
BERNALDO	33.7642	83.4331	0.00	0.52
Larue	71.0077	175.4635	0.01	1.09
Cahaba	55.3512	136.7756	0.01	0.85
Kirvin	41.0390	101.4093	0.00	0.63

Table 9-49

Guyton	115.2886	284.8840	0.01	1.77
WATER	2435.5319	6018.3211	0.26	37.29
SAWTOWN	0.3954	0.9770	0.00	0.01
Sacul	370.5367	915.6148	0.04	5.67
LILBERT	34.0015	84.0193	0.00	0.52
Beauregard	185.6637	458.7844	0.02	2.84
TENAHA	62.8631	155.3380	0.01	0.96
Eastwood	222.7490	550.4240	0.02	3.41
MOLLVILLE	207.7251	513.2992	0.02	3.18
DARCO	6.5631	16.2177	0.00	0.10
Bowie	245.9965	607.8698	0.03	3.77
Iuka	67.5285	166.8662	0.01	1.03
Metcalf	271.3000	670.3958	0.03	4.15
MABEN	217.6093	537.7234	0.02	3.33
METH	67.3703	166.4754	0.01	1.03
OWENTOWN	40.6436	100.4324	0.00	0.62
GALLIME	21.7451	53.7333	0.00	0.33
IULUS	11.9400	29.5044	0.00	0.18
BESNER	46.1787	114.1099	0.00	0.71
SUBBASIN #	46	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
LANDUSE:		8974.2200	22175.7463	0.96
Range-Brush --> RNGB		374.0642	924.3313	0.04 4.17
SR319 - Poultry Headquarters --> TBHQ		60.1697	148.6823	0.01 0.67
Pasture --> PAST		1008.4157	2491.8457	0.11 11.24
Range-Grasses --> RNGE		0.5535	1.3676	0.00 0.01
TPLH, SR319 Pastureland --> TPLH		0.8697	2.1492	0.00 0.01
Water --> WATR		1104.8770	2730.2063	0.12 12.31
Wetlands-Forested --> WETF		2092.8145	5171.4492	0.22 23.32
SR319 Pasture, no litter --> TBPA		50.5236	124.8463	0.01 0.56
Wetlands-Mixed --> WETL		648.3463	1602.0962	0.07 7.22
TPMH, SR319 Pasture --> TPMH		3.9533	9.7689	0.00 0.04
TPMM, SR319 Pasture --> TPMM		91.0848	225.0750	0.01 1.01
TPSS, SR319 Pasture --> TPSS		38.1101	94.1720	0.00 0.42
TPMV, SR319 Pasture --> TPMV		47.1237	116.4450	0.01 0.53
TPHH, SR319 Pasture --> TPHH		52.7374	130.3168	0.01 0.59
Forest-Deciduous --> FRSD		221.8609	548.2295	0.02 2.47
Forest-Evergreen --> FRSE		2342.8231	5789.2331	0.25 26.11

Table 9-50

TPHM, SR319 Pasture --> TPHM	5.6137	13.8718	0.00	0.06
TPHV, SR319 Pasture --> TPHV	46.3330	114.4913	0.00	0.52
Forest-Mixed --> FRST	517.0167	1277.5740	0.06	5.76
Residential-Low Density --> URLD	248.0320	612.8995	0.03	2.76
TPVH, SR319 Pasture --> TPVH	11.3065	27.9390	0.00	0.13
Residential-Medium Density --> URMD	1.5813	3.9076	0.00	0.02
SR 319 Hayland - no litter --> TBHA	6.0091	14.8487	0.00	0.07

SOIL:

LANEVILLE	263.7663	651.7796	0.03	2.94
HAINESVILLE	11.5437	28.5251	0.00	0.13
ATTOYAC	8.0648	19.9285	0.00	0.09
RENTZEL	40.3240	99.6426	0.00	0.45
DREKA	721.8783	1783.7973	0.08	8.04
ALAZAN	28.9384	71.5082	0.00	0.32
BERNALDO	72.6622	179.5520	0.01	0.81
AUSTONIO	58.0349	143.4071	0.01	0.65
KIRVIN	29.6500	73.2666	0.00	0.33
WATER	1531.9158	3785.4407	0.16	17.07
SAWTOWN	186.9135	461.8726	0.02	2.08
LILBERT	116.2279	287.2050	0.01	1.30
TENAHA	95.1171	235.0392	0.01	1.06
EASTWOOD	2153.5376	5321.4992	0.23	24.00
MOLLVILLE	598.6134	1479.2037	0.06	6.67
BOWIE	32.7336	80.8863	0.00	0.36
LATEX	107.3725	265.3228	0.01	1.20
METCALF	1317.5662	3255.7720	0.14	14.68
MABEN	956.0736	2362.5057	0.10	10.65
METH	229.3723	566.7904	0.02	2.56
GALLIME	114.7257	283.4929	0.01	1.28
OWENTOWN	264.5569	653.7334	0.03	2.95
BESNER	34.6312	85.5754	0.00	0.39

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	47	9412.4320	23258.5901	1.01	
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LANDUSE:					
Range-Brush --> RNGB	1571.5458	3883.3684	0.17	16.70	
Pasture --> PAST	1077.3242	2662.1219	0.12	11.45	
Range-Grasses --> RNGE	81.6850	201.8476	0.01	0.87	
Water --> WATR	277.3177	685.2658	0.03	2.95	

Table 9-51

Wetlands-Forested --> WETF	2401.6010	5934.4762	0.26	25.52
Wetlands-Mixed --> WETL	140.9916	348.3972	0.02	1.50
Forest-Deciduous --> FRSD	42.6217	105.3203	0.00	0.45
Forest-Evergreen --> FRSE	2984.7826	7375.5471	0.32	31.71
Forest-Mixed --> FRST	632.2874	1562.4139	0.07	6.72
Residential-Low Density --> URLD	202.2750	499.8318	0.02	2.15

SOIL:

Ruston	37.4027	92.4239	0.00	0.40
Elyrian	610.1463	1507.7020	0.07	6.48
Keithville	800.3228	1977.6377	0.09	8.50
Larue	216.8249	535.7852	0.02	2.30
Cahaba	162.8164	402.3274	0.02	1.73
Kirvin	1494.6054	3693.2447	0.16	15.88
Water	43.8078	108.2513	0.00	0.47
Guyton	716.6610	1770.9051	0.08	7.61
Sacul	3683.4934	9102.0965	0.39	39.13
Beauregard	142.4940	352.1098	0.02	1.51
Bowie	511.4601	1263.8435	0.05	5.43
DARCO	45.7847	113.1363	0.00	0.49
Flo	1.4234	3.5172	0.00	0.02
ALTO	152.8529	377.7071	0.02	1.62
Iuka	337.5732	834.1602	0.04	3.59
Metcalf	230.9004	570.5663	0.02	2.45
Meth	3.0049	7.4252	0.00	0.03
TRAWICK	220.8578	545.7506	0.02	2.35

SUBBASIN #	48	Area [ha]	Area [acres]	
			%Wat.Area	%Sub.Area
		3533.2096	8730.7376	0.38

LANDUSE:

Range-Brush --> RNGB	356.4674	880.8488	0.04	10.09
Pasture --> PAST	308.3218	761.8786	0.03	8.73
Range-Grasses --> RNGE	48.8571	120.7284	0.01	1.38
Water --> WATR	466.9889	1153.9530	0.05	13.22
Wetlands-Forested --> WETF	598.8558	1479.8026	0.06	16.95
Wetlands-Mixed --> WETL	165.1498	408.0934	0.02	4.67
Forest-Deciduous --> FRSD	32.8086	81.0717	0.00	0.93
Forest-Evergreen --> FRSE	1096.5188	2709.5527	0.12	31.03
Forest-Mixed --> FRST	394.3357	974.4231	0.04	11.16

Table 9-52

Residential-Low Density --> URLD	64.9057	160.3852	0.01	1.84
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SOIL:

Ruston	128.7046	318.0355	0.01	3.64
Elysian	256.6186	634.1174	0.03	7.26
Bonn	12.3329	30.4751	0.00	0.35
Keithville	200.8835	496.3932	0.02	5.69
Larue	100.2441	247.7082	0.01	2.84
Cahaba	44.7462	110.5701	0.00	1.27
Kirvin	206.4175	510.0679	0.02	5.84
Water	405.1665	1001.1866	0.04	11.47
Guyton	111.9445	276.6205	0.01	3.17
Sacul	1336.8517	3303.4273	0.14	37.84
Beauregard	191.2386	472.5601	0.02	5.41
Bowie	347.8502	859.5553	0.04	9.85
Iuka	172.4230	426.0659	0.02	4.88
Metcalf	16.5229	40.8289	0.00	0.47
Meth	1.2649	3.1257	0.00	0.04

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	49	1405.1568	3472.2127	0.15

LANDUSE:

Range-Brush --> RNGB	17.3369	42.8403	0.00	1.23
Pasture --> PAST	35.1487	86.8542	0.00	2.50
Water --> WATR	1260.9204	3115.7974	0.13	89.74
Wetlands-Forested --> WETF	28.5781	70.6180	0.00	2.03
Wetlands-Mixed --> WETL	29.6864	73.3566	0.00	2.11
Forest-Deciduous --> FRSD	3.5624	8.8028	0.00	0.25
Forest-Evergreen --> FRSE	21.2159	52.4255	0.00	1.51
Forest-Mixed --> FRST	7.3622	18.1924	0.00	0.52
Residential-Low Density --> URLD	1.3458	3.3255	0.00	0.10

SOIL:

DREKA	8.3122	20.5398	0.00	0.59
WATER	576.6289	1424.8787	0.06	41.04
KIRVIN	25.3324	62.5976	0.00	1.80
SACUL	705.1908	1742.5617	0.08	50.19
TENAHA	4.6707	11.5414	0.00	0.33
EASTWOOD	17.8910	44.2096	0.00	1.27
LATEX	0.8708	2.1518	0.00	0.06

Table 9-53

METCALF	4.5123	11.1502	0.00	0.32
MABEN	50.6648	125.1953	0.01	3.61
METH	11.0829	27.3865	0.00	0.79
<hr/>				
SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
	50	5836.6108	14422.5571	0.62
LANDUSE:				
Range-Brush --> RNGB	175.5853	433.8801	0.02	3.01
SR319 - Poultry Headquarters --> TBHQ	49.3315	121.9006	0.01	0.85
Pasture --> PAST	850.0195	2100.4407	0.09	14.56
TPLH, SR319 Pastureland --> TPLH	53.1262	131.2775	0.01	0.91
Water --> WATR	874.5271	2161.0003	0.09	14.98
Wetlands-Forested --> WETF	1223.8794	3024.2673	0.13	20.97
SR319 Pasture, no litter --> TBPA	3.6366	8.9863	0.00	0.06
Wetlands-Mixed --> WETL	56.6047	139.8731	0.01	0.97
TPMH, SR319 Pasture --> TPMH	2.7670	6.8374	0.00	0.05
TPMM, SR319 Pasture --> TPMM	1.5021	3.7117	0.00	0.03
TPSS, SR319 Pasture --> TPSS	85.8558	212.1539	0.01	1.47
TPMV, SR319 Pasture --> TPMV	38.7379	95.7232	0.00	0.66
TPHH, SR319 Pasture --> TPHH	34.8641	86.1509	0.00	0.60
Forest-Deciduous --> FRSD	26.6422	65.8341	0.00	0.46
Forest-Evergreen --> FRSE	1564.8517	3866.8269	0.17	26.81
TPHM, SR319 Pasture --> TPHM	23.7171	58.6060	0.00	0.41
TPHV, SR319 Pasture --> TPHV	25.2191	62.3178	0.00	0.43
Forest-Mixed --> FRST	507.7823	1254.7554	0.05	8.70
Residential-Low Density --> URLD	202.2275	499.7142	0.02	3.46
TPVH, SR319 Pasture --> TPVH	4.8225	11.9166	0.00	0.08
TPVM, SR319 Pasture --> TPVM	30.6741	75.7972	0.00	0.53
Residential-Medium Density --> URMD	0.2372	0.5861	0.00	0.00
SOIL:				
LANEVILLE	368.0888	909.5658	0.04	6.31
DREKA	111.2330	274.8624	0.01	1.91
ALAZAN	175.8225	434.4662	0.02	3.01
BERNALDO	18.1831	44.9313	0.00	0.31
AUSTONIO	20.3176	50.2058	0.00	0.35
WATER	841.4023	2079.1471	0.09	14.42
KIRVIN	39.8447	98.4582	0.00	0.68
SACUL	32.9667	81.4624	0.00	0.56
LILBERT	70.2816	173.6692	0.01	1.20

Table 9-54

SAWTOWN	133.1318	328.9753	0.01	2.28
TENAHA	29.0139	71.6947	0.00	0.50
EASTWOOD	1425.3954	3522.2233	0.15	24.42
BOWIE	16.1276	39.8521	0.00	0.28
MOLLVILLE	7.7476	19.1446	0.00	0.13
LATEX	166.5728	411.6098	0.02	2.85
METCALF	1261.6686	3117.6463	0.13	21.62
MABEN	550.6311	1360.6370	0.06	9.43
METH	270.2954	667.9136	0.03	4.63
GALLIME	8.5381	21.0982	0.00	0.15
OWENTOWN	289.3482	714.9938	0.03	4.96
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
	51	5058.2168	12499.1066	0.54
LANDUSE:				
Residential-High Density --> URHD	43.8222	108.2868	0.00	0.87
Range-Brush --> RNGB	296.7093	733.1835	0.03	5.87
SR319 - Poultry Headquarters --> TBHQ	137.1618	338.9336	0.01	2.71
Pasture --> PAST	1605.6789	3967.7128	0.17	31.74
TPLH, SR319 Pastureland --> TPLH	15.8203	39.0927	0.00	0.31
Water --> WATR	10.2041	25.2148	0.00	0.20
Wetlands-Forested --> WETF	721.4837	1782.8222	0.08	14.26
TPLM, SR319 Pasture --> TPLM	59.4842	146.9885	0.01	1.18
SR319 Pasture, no litter --> TBPA	93.4978	231.0378	0.01	1.85
Wetlands-Mixed --> WETL	7.4355	18.3736	0.00	0.15
TPMH, SR319 Pasture --> TPMH	22.7021	56.0980	0.00	0.45
TPMM, SR319 Pasture --> TPMM	155.1969	383.4993	0.02	3.07
TPSS, SR319 Pasture --> TPSS	20.3291	50.2341	0.00	0.40
TPMV, SR319 Pasture --> TPMV	10.9160	26.9740	0.00	0.22
TPHH, SR319 Pasture --> TPHH	2.6894	6.6458	0.00	0.05
Forest-Deciduous --> FRSD	58.3768	144.2520	0.01	1.15
Forest-Evergreen --> FRSE	520.8035	1286.9314	0.06	10.30
TPHM, SR319 Pasture --> TPHM	57.1903	141.3201	0.01	1.13
Forest-Mixed --> FRST	489.8748	1210.5052	0.05	9.68
Residential-Low Density --> URLD	626.7202	1548.6570	0.07	12.39
TPVH, SR319 Pasture --> TPVH	24.1259	59.6164	0.00	0.48
TPVM, SR319 Pasture --> TPVM	21.3574	52.7751	0.00	0.42
Agricultural Land-Row Crops --> AGRR	0.6328	1.5637	0.00	0.01
Residential-Medium Density --> URMD	56.0038	138.3881	0.01	1.11

Table 9-55

SOIL:

LANEVILLE	616.2788	1522.8558	0.07	12.18
DREKA	325.6604	804.7231	0.03	6.44
ALAZAN	29.8212	73.6897	0.00	0.59
BERNALDO	9.4131	23.2602	0.00	0.19
AUSTONIO	26.8945	66.4576	0.00	0.53
WATER	9.0176	22.2828	0.00	0.18
SAWTOWN	19.4589	48.0840	0.00	0.38
TENAHA	87.9607	217.3554	0.01	1.74
EASTWOOD	1057.2690	2612.5646	0.11	20.90
MOLLVILLE	82.0281	202.6956	0.01	1.62
LATEX	348.8371	861.9939	0.04	6.90
METCALF	1482.1225	3662.3989	0.16	29.30
MABEN	393.4503	972.2353	0.04	7.78
METH	463.7714	1146.0023	0.05	9.17
OWENTOWN	38.2851	94.6043	0.00	0.76
GALLIME	50.6249	125.0966	0.01	1.00
IULUS	12.4189	30.6878	0.00	0.25
BESNER	4.9043	12.1187	0.00	0.10

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	52	224.5215	554.8039	0.02	

LANDUSE:

Range-Brush --> RNGB	26.8979	66.4660	0.00	11.98
Pasture --> PAST	32.2455	79.6803	0.00	14.36
Wetlands-Forested --> WETF	139.9169	345.7416	0.01	62.32
Wetlands-Mixed --> WETL	0.3991	0.9861	0.00	0.18
Forest-Evergreen --> FRSE	18.5172	45.7570	0.00	8.25
Forest-Mixed --> FRST	2.5541	6.3113	0.00	1.14
Residential-Low Density --> URLD	3.9908	9.8614	0.00	1.78

SOIL:

LANEVILLE	68.9607	170.4054	0.01	30.71
DREKA	73.0313	180.4641	0.01	32.53
BOWIE	2.1550	5.3252	0.00	0.96
METCALF	1.7559	4.3390	0.00	0.78
MABEN	29.3722	72.5801	0.00	13.08
METH	21.1512	52.2656	0.00	9.42
GALLIME	26.8181	66.2688	0.00	11.94
BESNER	1.2771	3.1557	0.00	0.57

Table 9-56

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	53	2492.9794	6160.2767	0.27		
LANDUSE:						
Range-Brush --> RNGB		131.8384	325.7792	0.01	5.29	
Pasture --> PAST		145.9243	360.5863	0.02	5.85	
Range-Grasses --> RNGE		2.2158	5.4753	0.00	0.09	
Water --> WATR		1116.1945	2758.1723	0.12	44.77	
Wetlands-Forested --> WETF		292.9565	723.9102	0.03	11.75	
Wetlands-Mixed --> WETL		60.2215	148.8103	0.01	2.42	
Forest-Deciduous --> FRSD		3.0071	7.4307	0.00	0.12	
Forest-Evergreen --> FRSE		557.8203	1378.4018	0.06	22.38	
Forest-Mixed --> FRST		137.6152	340.0540	0.01	5.52	
Residential-Low Density --> URLD		45.1859	111.6566	0.00	1.81	
SOIL:						
Keithville		74.7031	184.5952	0.01	3.00	
Larue		7.7552	19.1635	0.00	0.31	
Kirvin		46.6895	115.3720	0.00	1.87	
Water		157.7945	389.9182	0.02	6.33	
Guyton		10.2084	25.2254	0.00	0.41	
Sacul		1252.3061	3094.5110	0.13	50.23	
EASTWOOD		1.1079	2.7376	0.00	0.04	
Bowie		4.3524	10.7550	0.00	0.17	
DARCO		351.4371	868.4185	0.04	14.10	
MOLLVILLE		241.4399	596.6100	0.03	9.68	
METCALF		13.2155	32.6561	0.00	0.53	
MABEN		0.8705	2.1510	0.00	0.03	
TRAWICK		331.0994	818.1633	0.04	13.28	
SUBBASIN #	54	5327.9588	13165.6526	0.57		
LANDUSE:						
Range-Brush --> RNGB		487.1855	1203.8598	0.05	9.14	
Pasture --> PAST		709.8989	1754.1956	0.08	13.32	
Range-Grasses --> RNGE		1.8190	4.4949	0.00	0.03	
Water --> WATR		365.6264	903.4811	0.04	6.86	

Table 9-57

Wetlands-Forested --> WETF	1072.0454	2649.0778	0.11	20.12
Wetlands-Mixed --> WETL	42.3915	104.7514	0.00	0.80
Forest-Deciduous --> FRSD	3.0845	7.6218	0.00	0.06
Forest-Evergreen --> FRSE	2086.4352	5155.6857	0.22	39.16
Forest-Mixed --> FRST	422.8074	1044.7783	0.05	7.94
Residential-Low Density --> URLD	135.9532	335.9472	0.01	2.55
Residential-Medium Density --> URMD	0.7118	1.7589	0.00	0.01

SOIL:

Ruston	2.9263	7.2310	0.00	0.05
Bonn	3.0054	7.4264	0.00	0.06
Keithville	146.7093	362.5259	0.02	2.75
Larue	4.2708	10.5533	0.00	0.08
Kirvin	121.7964	300.9649	0.01	2.29
Water	3.0845	7.6218	0.00	0.06
Guyton	130.1007	321.4853	0.01	2.44
Sacul	2076.6282	5131.4522	0.22	38.98
Bowie	51.9612	128.3987	0.01	0.98
DARCO	885.8709	2189.0313	0.09	16.63
MOLLVILLE	1684.6653	4162.8923	0.18	31.62
TRAWICK	216.9399	536.0694	0.02	4.07

SUBBASIN #	55	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		8920.3824	22042.7109	0.95	

LANDUSE:

Range-Brush --> RNGB	1216.2397	3005.3890	0.13	13.63
Pasture --> PAST	1707.5593	4219.4645	0.18	19.14
Range-Grasses --> RNGE	37.5627	92.8192	0.00	0.42
Water --> WATR	17.5556	43.3808	0.00	0.20
Wetlands-Forested --> WETF	1859.2334	4594.2588	0.20	20.84
Wetlands-Mixed --> WETL	4.6657	11.5291	0.00	0.05
Forest-Deciduous --> FRSD	59.7840	147.7291	0.01	0.67
Forest-Evergreen --> FRSE	3059.4200	7559.9798	0.33	34.30
Forest-Mixed --> FRST	589.7734	1457.3596	0.06	6.61
Residential-Low Density --> URLD	362.4204	895.5590	0.04	4.06
Residential-Medium Density --> URMD	6.1682	15.2419	0.00	0.07

SOIL:

Ruston	3.4004	8.4026	0.00	0.04
RENTZEL	592.1458	1463.2219	0.06	6.64

Table 9-58

Keithville	574.9856	1420.8182	0.06	6.45
Larue	2.6096	6.4485	0.00	0.03
Kirvin	181.0125	447.2910	0.02	2.03
Water	10.5175	25.9894	0.00	0.12
Guyton	63.3425	156.5225	0.01	0.71
Sacul	724.0501	1789.1640	0.08	8.12
Bowie	109.4458	270.4459	0.01	1.23
DARCO	2207.2615	5454.2534	0.24	24.74
MOLLVILLE	4451.6111	11000.1536	0.48	49.90

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	56	8688.9824	21470.9100	0.93	

LANDUSE:

Range-Brush --> RNGB	1040.8276	2571.9370	0.11	11.98
Pasture --> PAST	2161.7128	5341.7003	0.23	24.88
Range-Grasses --> RNGE	0.3967	0.9803	0.00	0.00
Water --> WATR	16.1067	39.8005	0.00	0.19
Wetlands-Forested --> WETF	1351.5366	3339.7146	0.14	15.55
Wetlands-Mixed --> WETL	6.9029	17.0574	0.00	0.08
Forest-Deciduous --> FRSD	127.8223	315.8554	0.01	1.47
Forest-Evergreen --> FRSE	3302.3544	8160.2829	0.35	38.01
Forest-Mixed --> FRST	384.8158	950.8991	0.04	4.43
Residential-Low Density --> URLD	273.8143	676.6088	0.03	3.15
Agricultural Land-Row Crops --> AGRR	21.1847	52.3485	0.00	0.24
Residential-Medium Density --> URMD	1.5075	3.7252	0.00	0.02

SOIL:

RENTZEL	1417.9471	3503.8182	0.15	16.32
DARCO	1765.3128	4362.1762	0.19	20.32
MOLLVILLE	5422.0152	13398.0705	0.58	62.40
TONKAWA	83.7074	206.8451	0.01	0.96

		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	57	18237.5504	45065.8989	1.95	

LANDUSE:

Residential-High Density --> URHD	29.8838	73.8443	0.00	0.16
Range-Brush --> RNGB	1608.1888	3973.9149	0.17	8.82

Table 9-59

SR319 - Poultry Headquarters --> TBHQ	214.9575	531.1707	0.02	1.18
Pasture --> PAST	4105.2217	10144.2081	0.44	22.51
Range-Grasses --> RNGE	14.5466	35.9454	0.00	0.08
TPLH, SR319 Pastureland --> TPLH	88.5445	218.7978	0.01	0.49
Water --> WATR	88.7026	219.1885	0.01	0.49
Wetlands-Forested --> WETF	3601.2298	8898.8189	0.38	19.75
TPLM, SR319 Pasture --> TPML	41.0309	101.3893	0.00	0.22
SR319 Pasture, no litter --> TBPA	70.8356	175.0382	0.01	0.39
Wetlands-Mixed --> WETL	29.8838	73.8443	0.00	0.16
TPMH, SR319 Pasture --> TPMH	56.2099	138.8975	0.01	0.31
TPMM, SR319 Pasture --> TPMM	454.8181	1123.8783	0.05	2.49
TPSS, SR319 Pasture --> TPSS	50.6759	125.2227	0.01	0.28
TPMV, SR319 Pasture --> TPMV	146.4146	361.7978	0.02	0.80
TPHH, SR319 Pasture --> TPHH	40.0031	98.8497	0.00	0.22
Forest-Deciduous --> FRSD	897.8567	2218.6487	0.10	4.92
Forest-Evergreen --> FRSE	3821.3260	9442.6877	0.41	20.95
TPHM, SR319 Pasture --> TPHM	40.0822	99.0451	0.00	0.22
TPHV, SR319 Pasture --> TPHV	29.2513	72.2814	0.00	0.16
Forest-Mixed --> FRST	1370.1465	3385.7005	0.15	7.51
Residential-Low Density --> URLD	1211.7152	2994.2087	0.13	6.64
TPVH, SR319 Pasture --> TPVH	17.4717	43.1735	0.00	0.10
TPVM, SR319 Pasture --> TPVM	51.6246	127.5669	0.01	0.28
Agricultural Land-Row Crops --> AGRR	54.8659	135.5765	0.01	0.30
TPVV, SR319 Pasture --> TPVV	14.3885	35.5546	0.00	0.08
Residential-Medium Density --> URMD	83.6429	206.6858	0.01	0.46
SR 319 Hayland - no litter --> TBHA	4.0319	9.9631	0.00	0.02

SOIL:

LANEVILLE	2988.8500	7385.5977	0.32	16.39
HAINESVILLE	2.2927	5.6653	0.00	0.01
RENTZEL	8.2220	20.3169	0.00	0.05
DREKA	473.0804	1169.0054	0.05	2.59
ALAZAN	112.8151	278.7718	0.01	0.62
BERNALDO	252.7470	624.5505	0.03	1.39
AUSTONIO	43.4026	107.2500	0.00	0.24
GUYTON	0.6325	1.5628	0.00	0.00
WATER	66.4083	164.0983	0.01	0.36
KIRVIN	286.3465	707.5764	0.03	1.57
SAWTOWN	162.1470	400.6735	0.02	0.89
SACUL	145.5450	359.6489	0.02	0.80
LILBERT	355.5218	878.5122	0.04	1.95
TENAHA	580.1243	1433.5163	0.06	3.18
CUTHBERT	583.7610	1442.5026	0.06	3.20

Table 9-60

EASTWOOD	3408.7246	8423.1290	0.36	18.69
MOLLVILLE	31.1487	76.9699	0.00	0.17
DARCO	1469.0475	3630.0898	0.16	8.06
BOWIE	59.7675	147.6885	0.01	0.33
LATEX	791.9986	1957.0681	0.08	4.34
METCALF	1173.4513	2899.6568	0.13	6.43
GRAPELAND	91.7068	226.6120	0.01	0.50
MABEN	3563.5193	8805.6344	0.38	19.54
METH	589.2950	1456.1775	0.06	3.23
GALLIME	42.7701	105.6871	0.00	0.23
OWENTOWN	75.0256	185.3921	0.01	0.41
BETIS	850.2640	2101.0449	0.09	4.66
BESNER	28.9351	71.5000	0.00	0.16
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SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area %Sub.Area
SUBBASIN #	58	5688.9324	14057.6364	0.61
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LANDUSE:				
SR319 - Poultry Headquarters --> TBHQ	488.4133	1206.8938	0.05	8.59
Pasture --> PAST	97.5562	241.0662	0.01	1.71
Range-Grasses --> RNGE	1087.7435	2687.8685	0.12	19.12
TPLH, SR319 Pastureland --> TPLH	4.6644	11.5259	0.00	0.08
Water --> WATR	7.5104	18.5586	0.00	0.13
Wetlands-Forested --> WETF	6.6408	16.4097	0.00	0.12
SR319 Pasture, no litter --> TBPA	978.6450	2418.2807	0.10	17.20
Wetlands-Mixed --> WETL	57.9487	143.1941	0.01	1.02
TPMH, SR319 Pasture --> TPMH	7.4313	18.3632	0.00	0.13
TPMH, SR319 Pasture --> TPSS	51.8613	128.1519	0.01	0.91
TPMV, SR319 Pasture --> TPMV	206.4175	510.0679	0.02	3.63
TPHH, SR319 Pasture --> TPHH	43.9556	108.6165	0.00	0.77
TPHH, SR319 Pasture --> FRSD	36.2871	89.6672	0.00	0.64
Forest-Deciduous --> FRSE	104.4341	258.0619	0.01	1.84
Forest-Evergreen --> FRSE	1688.3385	4171.9689	0.18	29.68
TPHM, SR319 Pasture --> TPHM	56.6047	139.8731	0.01	0.99
TPHV, SR319 Pasture --> TPHV	19.4480	48.0570	0.00	0.34
Forest-Mixed --> FRST	448.8849	1109.2171	0.05	7.89
Residential-Low Density --> URLD	199.2233	492.2908	0.02	3.50
TPVH, SR319 Pasture --> TPVH	9.2497	22.8564	0.00	0.16
TPVM, SR319 Pasture --> TPVM	6.1664	15.2376	0.00	0.11
TPVV, SR319 Pasture --> TPVV	41.5049	102.5606	0.00	0.73
Residential-Medium Density --> URMD	1.3440	3.3210	0.00	0.02

Table 9-61

SR 319 Hayland - no litter --> TBHA	38.6588	95.5279	0.00	0.68
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SOIL:

LANEVILLE	932.0805	2303.2175	0.10	16.38
DREKA	36.1290	89.2765	0.00	0.64
AUSTONIO	18.2621	45.1267	0.00	0.32
WATER	4.3481	10.7444	0.00	0.08
KIRVIN	105.5409	260.7969	0.01	1.86
SAWTOWN	64.1151	158.4317	0.01	1.13
LILBERT	44.6671	110.3747	0.00	0.79
SACUL	83.8003	207.0747	0.01	1.47
TENAHA	123.7240	305.7282	0.01	2.17
CUTHBERT	502.4855	1241.6667	0.05	8.83
EASTWOOD	1466.8212	3624.5885	0.16	25.78
DARCO	417.8156	1032.4431	0.04	7.34
BOWIE	58.0277	143.3895	0.01	1.02
LATEX	284.7628	703.6632	0.03	5.01
METCALF	363.7407	898.8214	0.04	6.39
GRAPELAND	10.5936	26.1774	0.00	0.19
MABEN	734.9127	1816.0059	0.08	12.92
METH	251.1637	620.6380	0.03	4.41
OWENTOWN	66.9612	165.4644	0.01	1.18
BETIS	118.9806	294.0070	0.01	2.09

SUBBASIN #	59	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		9201.6664	22737.7778	0.98	

LANDUSE:

Range-Brush --> RNGB	693.2957	1713.1684	0.07	7.53
SR319 - Poultry Headquarters --> TBHQ	27.8330	68.7768	0.00	0.30
Pasture --> PAST	971.8633	2401.5229	0.10	10.56
TPLH, SR319 Pastureland --> TPLH	43.5682	107.6592	0.00	0.47
Water --> WATR	7.1164	17.5850	0.00	0.08
Wetlands-Forested --> WETF	2226.4060	5501.5606	0.24	24.20
SR319 Pasture, no litter --> TBPA	40.8798	101.0160	0.00	0.44
Wetlands-Mixed --> WETL	49.0241	121.1410	0.01	0.53
TPMH, SR319 Pasture --> TPMH	0.3954	0.9769	0.00	0.00
TPSS, SR319 Pasture --> TPSS	43.8845	108.4407	0.00	0.48
TPMV, SR319 Pasture --> TPMV	2.6884	6.6432	0.00	0.03
Forest-Deciduous --> FRSD	72.7454	179.7576	0.01	0.79
Forest-Evergreen --> FRSE	3883.4998	9596.3223	0.42	42.20

Table 9-62

TPHM, SR319 Pasture --> TPHM	29.1772	72.0984	0.00	0.32
Forest-Mixed --> FRST	752.1247	1858.5376	0.08	8.17
Residential-Low Density --> URLD	275.8001	681.5159	0.03	3.00
TPVH, SR319 Pasture --> TPVH	27.6749	68.3861	0.00	0.30
TPVM, SR319 Pasture --> TPVM	44.9915	111.1762	0.00	0.49
TPVV, SR319 Pasture --> TPVV	6.4838	16.0219	0.00	0.07
Residential-Medium Density --> URMD	2.2140	5.4709	0.00	0.02

SOIL:

LANEVILLE	745.5618	1842.3204	0.08	8.10
RENTZEL	3.7163	9.1833	0.00	0.04
DREKA	532.8604	1316.7247	0.06	5.79
ALAZAN	45.9403	113.5209	0.00	0.50
BERNALDO	17.2375	42.5947	0.00	0.19
AUSTONIO	168.8959	417.3503	0.02	1.84
KIRVIN	15.4979	38.2962	0.00	0.17
WATER	186.3707	460.5312	0.02	2.03
SAWTOWN	220.3713	544.5484	0.02	2.39
LILBERT	55.1917	136.3813	0.01	0.60
CUTHBERT	43.1728	106.6822	0.00	0.47
TENAHA	35.8192	88.5111	0.00	0.39
EASTWOOD	2686.2047	6637.7461	0.29	29.19
MOLLVILLE	228.6737	565.0642	0.02	2.49
LATEX	621.2619	1535.1693	0.07	6.75
METCALF	2338.4498	5778.4264	0.25	25.41
MABEN	569.8657	1408.1666	0.06	6.19
METH	353.0526	872.4107	0.04	3.84
GALLIME	64.9965	160.6095	0.01	0.71
OWENTOWN	184.2357	455.2557	0.02	2.00
IULUS	28.4656	70.3399	0.00	0.31
BESNER	55.8242	137.9444	0.01	0.61

SUBBASIN #	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	60	5341.0824	13198.0817	0.57
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LANDUSE:				
SR319 - Poultry Headquarters --> TBHQ	621.7823	1536.4552	0.07	11.64
Range-Brush --> RNGB	17.7087	43.7592	0.00	0.33
Pasture --> PAST	704.5549	1740.9903	0.08	13.19
Range-Grasses --> RNGE	0.4743	1.1721	0.00	0.01
Water --> WATR	11.8585	29.3030	0.00	0.22

Table 9-63

Wetlands-Forested --> WETF	1497.7325	3700.9718	0.16	28.04
Wetlands-Mixed --> WETL	8.4591	20.9028	0.00	0.16
TPMM, SR319 Pasture --> TPMM	13.8350	34.1869	0.00	0.26
Forest-Deciduous --> FRSD	82.2191	203.1676	0.01	1.54
Forest-Evergreen --> FRSE	1589.5966	3927.9726	0.17	29.76
TPHM, SR319 Pasture --> TPHM	13.0444	32.2333	0.00	0.24
Forest-Mixed --> FRST	618.3038	1527.8596	0.07	11.58
Residential-Low Density --> URLD	136.1359	336.3987	0.01	2.55
TPVH, SR319 Pasture --> TPVH	0.5534	1.3675	0.00	0.01
TPVM, SR319 Pasture --> TPVM	17.6297	43.5638	0.00	0.33
Residential-Medium Density --> URMD	1.1068	2.7349	0.00	0.02
SR 319 Hayland - no litter --> TBHA	6.0874	15.0422	0.00	0.11

SOIL:

LANEVILLE	642.2580	1587.0517	0.07	12.02
DREKA	57.2372	141.4359	0.01	1.07
ALAZAN	121.1151	299.2815	0.01	2.27
BERNALDO	9.4078	23.2471	0.00	0.18
AUSTONIO	25.5354	63.0992	0.00	0.48
WATER	11.2261	27.7402	0.00	0.21
KIRVIN	11.4632	28.3263	0.00	0.21
SAWTOWN	287.4508	710.3053	0.03	5.38
LILBERT	127.5978	315.3005	0.01	2.39
TENAHA	176.4549	436.0290	0.02	3.30
EASTWOOD	1590.0709	3929.1447	0.17	29.77
MOLLVILLE	24.3495	60.1689	0.00	0.46
BOWIE	10.9889	27.1541	0.00	0.21
LATEX	78.7406	194.5721	0.01	1.47
METCALF	1052.5632	2600.9363	0.11	19.71
MABEN	596.7213	1474.5281	0.06	11.17
METH	480.6658	1187.7492	0.05	9.00
GALLIME	31.1484	76.9693	0.00	0.58
OWENTOWN	6.0874	15.0422	0.00	0.11

SUBBASIN #	61	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		2769.6784	6844.0138	0.30	
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LANDUSE:					
Range-Brush --> RNGB	117.3995	290.0999	0.01	4.24	
SR319 - Poultry Headquarters --> TBHQ	21.0291	51.9640	0.00	0.76	

Table 9-64

Pasture --> PAST	266.7379	659.1226	0.03	9.63
Range-Grasses --> RNGE	0.9487	2.3442	0.00	0.03
TPLH, SR319 Pastureland --> TPLH	24.1123	59.5828	0.00	0.87
Water --> WATR	786.3787	1943.1811	0.08	28.39
Wetlands-Forested --> WETF	382.1609	944.3387	0.04	13.80
SR319 Pasture, no litter --> TBPA	20.9501	51.7687	0.00	0.76
Wetlands-Mixed --> WETL	97.8724	241.8476	0.01	3.53
TPMH, SR319 Pasture --> TPMH	5.4549	13.4794	0.00	0.20
TPSS, SR319 Pasture --> TPSS	33.4411	82.6345	0.00	1.21
Forest-Deciduous --> FRSD	16.3648	40.4382	0.00	0.59
Forest-Evergreen --> FRSE	623.2844	1540.1668	0.07	22.50
TPHM, SR319 Pasture --> TPHM	11.7795	29.1077	0.00	0.43
Forest-Mixed --> FRST	251.6380	621.8101	0.03	9.09
Residential-Low Density --> URLD	75.7365	187.1486	0.01	2.73
TPVH, SR319 Pasture --> TPVH	3.1623	7.8141	0.00	0.11
TPVM, SR319 Pasture --> TPVM	28.1442	69.5458	0.00	1.02
SR 319 Hayland - no litter --> TBHA	3.0832	7.6188	0.00	0.11

SOIL:

LANEVILLE	80.5590	199.0652	0.01	2.91
ATTOYAC	20.5548	50.7919	0.00	0.74
DREKA	4.5853	11.3305	0.00	0.17
ALAZAN	88.7018	219.1866	0.01	3.20
AUSTONIO	34.7850	85.9555	0.00	1.26
WATER	480.3495	1186.9677	0.05	17.34
SACUL	415.4439	1026.5825	0.04	15.00
SAWTOWN	161.5132	399.1072	0.02	5.83
LILBERT	56.1304	138.7010	0.01	2.03
CUTHBERT	12.1748	30.0844	0.00	0.44
TENAHA	135.6616	335.2266	0.01	4.90
EASTWOOD	459.0042	1134.2223	0.05	16.57
MOLLVILLE	14.3884	35.5543	0.00	0.52
METCALF	146.3343	361.5993	0.02	5.28
MABEN	189.3412	467.8716	0.02	6.84
METH	113.5257	280.5276	0.01	4.10
GALLIME	274.9598	679.4394	0.03	9.93
OWENTOWN	78.7406	194.5721	0.01	2.84
BESNER	2.9251	7.2281	0.00	0.11

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	62	5961.9948	14732.3873	0.64

Table 9-65

LANDUSE:

Range-Brush --> RNGB	364.0859	899.6743	0.04	6.11
SR319 - Poultry Headquarters --> TBHQ	3.8741	9.5731	0.00	0.06
Pasture --> PAST	485.1316	1198.7843	0.05	8.14
Range-Grasses --> RNGE	48.3076	119.3705	0.01	0.81
Water --> WATR	1948.2744	4814.2835	0.21	32.68
Wetlands-Forested --> WETF	688.6401	1701.6642	0.07	11.55
Wetlands-Mixed --> WETL	526.1653	1300.1808	0.06	8.83
TPMH, SR319 Pasture --> TPMH	1.2650	3.1259	0.00	0.02
TPMM, SR319 Pasture --> TPMM	16.4451	40.6368	0.00	0.28
TPSS, SR319 Pasture --> TPSS	21.1889	52.3589	0.00	0.36
Forest-Deciduous --> FRSD	7.5110	18.5601	0.00	0.13
Forest-Evergreen --> FRSE	1510.6598	3732.9159	0.16	25.34
TPHM, SR319 Pasture --> TPHM	5.5344	13.6758	0.00	0.09
Forest-Mixed --> FRST	170.4602	421.2156	0.02	2.86
Residential-Low Density --> URLD	138.6768	342.6773	0.01	2.33
TPVM, SR319 Pasture --> TPVM	24.9840	61.7366	0.00	0.42
Residential-Medium Density --> URMD	0.7906	1.9537	0.00	0.01

SOIL:

BRILEY	0.1581	0.3907	0.00	0.00
WATER	211.8102	523.3936	0.02	3.55
SAWTOWN	0.1581	0.3907	0.00	0.00
SACUL	2299.3939	5681.9173	0.25	38.57
EASTWOOD	136.6211	337.5977	0.01	2.29
LATEX	58.8230	145.3546	0.01	0.99
MOLLVILLE	2774.4054	6855.6944	0.30	46.53
METCALF	257.7459	636.9030	0.03	4.32
MABEN	0.0791	0.1954	0.00	0.00
METH	14.7848	36.5340	0.00	0.25
GALLIME	208.0152	514.0159	0.02	3.49

SUBBASIN #	63	Area [ha]	Area [acres]		
			%Wat.	Area	%Sub.Area
		7369.7608	18211.0474	0.79	
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LANDUSE:					
Range-Brush --> RNGB	363.1738	897.4206	0.04	4.93	
Pasture --> PAST	129.1566	319.1524	0.01	1.75	
Range-Grasses --> RNGE	4.7484	11.7335	0.00	0.06	
Water --> WATR	3716.1803	9182.8673	0.40	50.42	

Table 9-66

Wetlands-Forested --> WETF	602.2559	1488.2045	0.06	8.17
Wetlands-Mixed --> WETL	509.8203	1259.7915	0.05	6.92
Forest-Deciduous --> FRSD	22.0009	54.3654	0.00	0.30
Forest-Evergreen --> FRSE	1510.4674	3732.4404	0.16	20.50
Forest-Mixed --> FRST	365.3106	902.7007	0.04	4.96
Residential-Low Density --> URLD	146.6466	362.3710	0.02	1.99

SOIL:

ATTOYAC	0.3166	0.7822	0.00	0.00
BRILEY	7.8349	19.3603	0.00	0.11
WATER	1165.9707	2881.1718	0.12	15.82
SAWTOWN	40.5989	100.3218	0.00	0.55
LILBERT	255.3059	630.8736	0.03	3.46
SACUL	3010.8840	7440.0449	0.32	40.85
CUTHBERT	4.5110	11.1469	0.00	0.06
TENAHA	375.2822	927.3411	0.04	5.09
EASTWOOD	227.8443	563.0146	0.02	3.09
LATEX	7.9931	19.7515	0.00	0.11
DARCO	661.7693	1635.2650	0.07	8.98
MOLLVILLE	1128.3791	2788.2812	0.12	15.31
METCALF	31.8934	78.8103	0.00	0.43
MABEN	293.7679	725.9153	0.03	3.99
METH	14.4826	35.7873	0.00	0.20
OWENTOWN	34.3468	84.8726	0.00	0.47
TRAWICK	108.5802	268.3070	0.01	1.47

SUBBASIN #	64	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
			117171.0628	5.07	

LANDUSE:

Residential-High Density --> URHD	17.2983	42.7450	0.00	0.04
Range-Brush --> RNGB	5983.8736	14786.4508	0.64	12.62
Pasture --> PAST	5796.7516	14324.0631	0.62	12.22
Range-Grasses --> RNGE	390.1204	964.0070	0.04	0.82
Water --> WATR	1174.5476	2902.3658	0.13	2.48
Wetlands-Forested --> WETF	9636.9772	23813.4524	1.03	20.32
Wetlands-Mixed --> WETL	462.7891	1143.5751	0.05	0.98
Forest-Deciduous --> FRSD	350.9425	867.1964	0.04	0.74
Forest-Evergreen --> FRSE	18175.6299	44912.8903	1.94	38.33
Forest-Mixed --> FRST	3251.2930	8034.1076	0.35	6.86
Residential-Low Density --> URLD	1988.1212	4912.7469	0.21	4.19

Table 9-67

Agricultural Land-Row Crops --> AGRR	94.5483	233.6336	0.01	0.20
Residential-Medium Density --> URMD	94.6273	233.8288	0.01	0.20

SOIL:

Ruston	50.4732	124.7217	0.01	0.11
RENTZEL	2048.3888	5061.6712	0.22	4.32
Bonn	39.0199	96.4202	0.00	0.08
Keithville	2899.7976	7165.5449	0.31	6.12
Larue	36.0974	89.1985	0.00	0.08
Cahaba	779.9249	1927.2333	0.08	1.64
Water	86.8865	214.7009	0.01	0.18
Guyton	2912.3566	7196.5789	0.31	6.14
Kirvin	6893.9702	17035.3451	0.74	14.54
Kolin	6.0821	15.0291	0.00	0.01
Sacul	10670.7686	26368.0027	1.14	22.50
Beauregard	658.8367	1628.0183	0.07	1.39
Eastwood	2055.8137	5080.0184	0.22	4.34
Bowie	595.9624	1472.6530	0.06	1.26
DARCO	6035.9265	14915.0761	0.65	12.73
MOLLVILLE	6903.3698	17058.5718	0.74	14.56
Iuka	1012.5437	2502.0462	0.11	2.14
Metcalf	585.1411	1445.9130	0.06	1.23
Meth	3.4755	8.5880	0.00	0.01
TRAWICK	3142.6849	7765.7315	0.34	6.63

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	65	13723.7200	33911.9983	1.47	

LANDUSE:

Range-Brush --> RNGB	1535.5781	3794.4902	0.16	11.19
Pasture --> PAST	1560.8059	3856.8295	0.17	11.37
Range-Grasses --> RNGE	3.1634	7.8168	0.00	0.02
Water --> WATR	30.2102	74.6508	0.00	0.22
Wetlands-Forested --> WETF	3638.9017	8991.9080	0.39	26.52
Wetlands-Mixed --> WETL	120.3662	297.4308	0.01	0.88
Forest-Deciduous --> FRSD	51.8792	128.1962	0.01	0.38
Forest-Evergreen --> FRSE	5542.1423	13694.9106	0.59	40.38
Forest-Mixed --> FRST	803.9701	1986.6502	0.09	5.86
Residential-Low Density --> URLD	425.5521	1051.5606	0.05	3.10
Residential-Medium Density --> URMD	11.1509	27.5544	0.00	0.08

Table 9-68

SOIL:

RENTZEL	3264.2798	8066.1986	0.35	23.79
Water	0.2373	0.5863	0.00	0.00
Kirvin	70.2268	173.5339	0.01	0.51
SACUL	295.6959	730.6792	0.03	2.15
DARCO	4318.8677	10672.1381	0.46	31.47
MOLLVILLE	5774.4126	14268.8622	0.62	42.08

SUBBASIN #

66

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
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34928.8136

1.51

LANDUSE:

Residential-High Density --> URHD	10.7517	26.5681	0.00	0.08
Range-Brush --> RNGB	1084.8184	2680.6406	0.12	7.67
Pasture --> PAST	1111.7768	2747.2562	0.12	7.87
Range-Grasses --> RNGE	0.3953	0.9768	0.00	0.00
Water --> WATR	48.9362	120.9238	0.01	0.35
Wetlands-Forested --> WETF	2815.6897	6957.7100	0.30	19.92
Wetlands-Mixed --> WETL	75.9737	187.7347	0.01	0.54
Forest-Deciduous --> FRSD	300.1790	741.7572	0.03	2.12
Forest-Evergreen --> FRSE	7439.5682	18383.5450	0.80	52.63
Forest-Mixed --> FRST	617.5133	1525.9061	0.07	4.37
Residential-Low Density --> URLD	604.7060	1494.2589	0.06	4.28
Residential-Medium Density --> URMD	24.9029	61.5363	0.00	0.18

SOIL:

RENTZEL	4165.1115	10292.1987	0.45	29.47
SACUL	112.1817	277.2066	0.01	0.79
DARCO	3154.1322	7794.0183	0.34	22.31
MOLLVILLE	6703.7859	16565.3900	0.72	47.43

SUBBASIN #

67

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
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6193.0780

15303.4054

0.66

LANDUSE:

Range-Brush --> RNGB	341.7628	844.5131	0.04	5.52
Pasture --> PAST	134.7129	332.8823	0.01	2.18
Range-Grasses --> RNGE	4.0319	9.9630	0.00	0.07
Water --> WATR	1193.9168	2950.2282	0.13	19.28

Table 9-69

Wetlands-Forested --> WETF	1130.4342	2793.3594	0.12	18.25
Wetlands-Mixed --> WETL	110.1262	272.1274	0.01	1.78
Forest-Deciduous --> FRSD	18.8946	46.6895	0.00	0.31
Forest-Evergreen --> FRSE	2724.3788	6732.0762	0.29	43.99
Forest-Mixed --> FRST	385.7975	953.3250	0.04	6.23
Residential-Low Density --> URLD	148.3107	366.4831	0.02	2.39
Residential-Medium Density --> URMD	0.7115	1.7582	0.00	0.01

SOIL:

LANEVILLE	339.8655	839.8246	0.04	5.49
DREKA	7.7476	19.1446	0.00	0.13
ALAZAN	7.5895	18.7539	0.00	0.12
BERNALDO	51.1498	126.3937	0.01	0.83
BRILEY	3.1623	7.8141	0.00	0.05
AUSTONIO	20.4757	50.5966	0.00	0.33
GUYTON	4.2691	10.5491	0.00	0.07
WATER	648.1082	1601.5078	0.07	10.47
SACUL	618.2247	1527.6642	0.07	9.98
SAWTOWN	773.7296	1911.9245	0.08	12.49
LILBERT	83.5631	206.4886	0.01	1.35
TENAHA	40.8724	100.9977	0.00	0.66
EASTWOOD	1420.6519	3510.5020	0.15	22.94
LATEX	14.2302	35.1636	0.00	0.23
METCALF	604.2317	1493.0866	0.06	9.76
MABEN	1227.5160	3033.2535	0.13	19.82
METH	225.2330	556.5621	0.02	3.64
OWENTOWN	99.9279	246.9268	0.01	1.61
BETIS	2.5298	6.2513	0.00	0.04

SUBBASIN #	68	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
		2547.4496	6294.8753	0.27	
LANDUSE:					
Range-Brush --> RNGB	98.5691	243.5692	0.01	3.87	
Pasture --> PAST	136.6203	337.5955	0.01	5.36	
Water --> WATR	1160.1251	2866.7271	0.12	45.54	
Wetlands-Forested --> WETF	80.3742	198.6086	0.01	3.16	
Wetlands-Mixed --> WETL	346.0994	855.2289	0.04	13.59	
Forest-Evergreen --> FRSE	685.1581	1693.0599	0.07	26.90	
Forest-Mixed --> FRST	30.6941	75.8466	0.00	1.20	
Residential-Low Density --> URLD	9.2557	22.8713	0.00	0.36	

Table 9-70

Residential-Medium Density --> URMD	0.5538	1.3684	0.00	0.02
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SOIL:

WATER	12.9738	32.0589	0.00	0.51
SACUL	1676.4658	4142.6308	0.18	65.81
DARCO	562.3818	1389.6736	0.06	22.08
TRAWICK	295.6282	730.5121	0.03	11.60

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	69	6607.1780	16326.6672	0.71

LANDUSE:

Range-Brush --> RNGB	773.7944	1912.0847	0.08	11.71
Pasture --> PAST	1143.9697	2826.8063	0.12	17.31
Range-Grasses --> RNGE	4.5066	11.1361	0.00	0.07
Water --> WATR	11.2270	27.7425	0.00	0.17
Wetlands-Forested --> WETF	1266.0437	3128.4573	0.14	19.16
Wetlands-Mixed --> WETL	4.5857	11.3315	0.00	0.07
Forest-Deciduous --> FRSD	47.4381	117.2219	0.01	0.72
Forest-Evergreen --> FRSE	2647.2039	6541.3731	0.28	40.07
Forest-Mixed --> FRST	397.3731	981.9288	0.04	6.01
Residential-Low Density --> URLD	301.4691	744.9452	0.03	4.56
Residential-Medium Density --> URMD	9.5667	23.6398	0.00	0.14

SOIL:

RENTZEL	1411.2834	3487.3517	0.15	21.36
DARCO	1777.7426	4392.8910	0.19	26.91
MOLLVILLE	3010.5006	7439.0976	0.32	45.56
TONKAWA	407.6514	1007.3269	0.04	6.17

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
SUBBASIN #	70	5155.1404	12738.6097	0.55

LANDUSE:

Residential-High Density --> URHD	6.1664	15.2376	0.00	0.12
Range-Brush --> RNGB	636.6450	1573.1816	0.07	12.35
Pasture --> PAST	827.3301	2044.3742	0.09	16.05
Range-Grasses --> RNGE	6.2455	15.4329	0.00	0.12
Water --> WATR	10.5936	26.1774	0.00	0.21

Table 9-71

Wetlands-Forested --> WETF	869.9418	2149.6697	0.09	16.88
Wetlands-Mixed --> WETL	4.9806	12.3073	0.00	0.10
Forest-Deciduous --> FRSD	62.5340	154.5246	0.01	1.21
Forest-Evergreen --> FRSE	1684.6228	4162.7873	0.18	32.68
Forest-Mixed --> FRST	439.9515	1087.1421	0.05	8.53
Residential-Low Density --> URLD	578.1429	1428.6200	0.06	11.21
Agricultural Land-Row Crops --> AGRR	14.5465	35.9450	0.00	0.28
Residential-Medium Density --> URMD	13.4397	33.2101	0.00	0.26

SOIL:

MOLLVILLE	390.1457	964.0694	0.04	7.57
DARCO	1460.3385	3608.5695	0.16	28.33
TONKAWA	3289.1611	8127.6815	0.35	63.80
TRAWICK	15.4951	38.2893	0.00	0.30

SUBBASIN

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
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71	9029.9552	22313.4708	0.97	
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LANDUSE:

Range-Brush --> RNGB	248.8732	614.9782	0.03	2.76
Pasture --> PAST	128.6267	317.8429	0.01	1.42
Range-Grasses --> RNGE	7.0361	17.3866	0.00	0.08
Water --> WATR	4453.6289	11005.1398	0.48	49.32
Wetlands-Forested --> WETF	484.7019	1197.7227	0.05	5.37
Wetlands-Mixed --> WETL	748.9123	1850.5998	0.08	8.29
Forest-Deciduous --> FRSD	43.8769	108.4221	0.00	0.49
Forest-Evergreen --> FRSE	2498.9306	6174.9825	0.27	27.67
Forest-Mixed --> FRST	258.8345	639.5929	0.03	2.87
Residential-Low Density --> URLD	156.5340	386.8033	0.02	1.73

SOIL:

LANEVILLE	133.5282	329.9549	0.01	1.48
RENTZEL	8.9335	22.0751	0.00	0.10
ATTOYAC	1582.4953	3910.4250	0.17	17.52
ALAZAN	17.4717	43.1735	0.00	0.19
BERNALDO	451.1025	1114.6968	0.05	5.00
BRILEY	80.2434	198.2855	0.01	0.89
WATER	130.0497	321.3593	0.01	1.44
SAWTOWN	74.2351	183.4385	0.01	0.82
SACUL	4406.6687	10889.0988	0.47	48.80

Table 9-72

EASTWOOD	623.8433	1541.5479	0.07	6.91
LATEX	87.9911	217.4303	0.01	0.97
DARCO	515.8506	1274.6927	0.06	5.71
METCALF	412.6014	1019.5588	0.04	4.57
MABEN	332.5952	821.8593	0.04	3.68
METH	103.6445	256.1107	0.01	1.15
GALLIME	21.3455	52.7459	0.00	0.24
TRAWICK	47.3555	117.0178	0.01	0.52
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SUBBASIN #	72	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
		8512.0536	21033.7100	0.91
<hr/>				
LANDUSE:				
Range-Brush --> RNGB	781.5563	1931.2646	0.08	9.18
Pasture --> PAST	460.9016	1138.9108	0.05	5.41
Range-Grasses --> RNGE	9.3287	23.0517	0.00	0.11
Water --> WATR	2409.3373	5953.5929	0.26	28.31
Wetlands-Forested --> WETF	608.9751	1504.8079	0.07	7.15
Wetlands-Mixed --> WETL	458.9252	1134.0270	0.05	5.39
Forest-Deciduous --> FRSD	56.2885	139.0917	0.01	0.66
Forest-Evergreen --> FRSE	3025.5856	7476.3733	0.32	35.54
Forest-Mixed --> FRST	400.5812	989.8561	0.04	4.71
Residential-Low Density --> URLD	296.0680	731.5988	0.03	3.48
Residential-Medium Density --> URMD	4.5062	11.1351	0.00	0.05
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SOIL:				
RENTZEL	1109.0098	2740.4187	0.12	13.03
BERNALDO	187.2067	462.5971	0.02	2.20
SACUL	2700.8200	6673.8612	0.29	31.73
DARCO	1433.8545	3543.1262	0.15	16.84
MOLLVILLE	2522.7048	6233.7298	0.27	29.64
TRAWICK	558.4578	1379.9770	0.06	6.56
<hr/>				
SUBBASIN #	73	Area [ha]	Area [acres]	%Wat.Area %Sub.Area
		38207.8688	94413.5542	4.08
<hr/>				
LANDUSE:				
Range-Brush --> RNGB	3401.9600	8406.4133	0.36	8.90
SR319 - Poultry Headquarters --> TBHQ	175.3677	433.3424	0.02	0.46

Table 9-73

Pasture --> PAST	4900.0179	12108.1893	0.52	12.82
Range-Grasses --> RNGE	3.7952	9.3780	0.00	0.01
TPLH, SR319 Pastureland --> TPLH	103.0226	254.5740	0.01	0.27
Water --> WATR	1489.3607	3680.2847	0.16	3.90
Wetlands-Forested --> WETF	9573.5917	23656.8237	1.02	25.06
SR319 Pasture, no litter --> TBPA	172.3632	425.9182	0.02	0.45
Wetlands-Mixed --> WETL	412.8811	1020.2499	0.04	1.08
TPMH, SR319 Pasture --> TPMH	119.4683	295.2121	0.01	0.31
TPMM, SR319 Pasture --> TPMM	55.8204	137.9350	0.01	0.15
TPSS, SR319 Pasture --> TPSS	98.9903	244.6099	0.01	0.26
TPMV, SR319 Pasture --> TPMV	20.9524	51.7745	0.00	0.05
TPHH, SR319 Pasture --> TPHH	70.5266	174.2748	0.01	0.18
Forest-Deciduous --> FRSD	1186.9343	2932.9741	0.13	3.11
Forest-Evergreen --> FRSE	12415.3712	30679.0030	1.33	32.49
TPHM, SR319 Pasture --> TPHM	277.2834	685.1812	0.03	0.73
Forest-Mixed --> FRST	2304.6862	5694.9948	0.25	6.03
Residential-Low Density --> URLD	1152.4617	2847.7905	0.12	3.02
TPVH, SR319 Pasture --> TPVH	106.2643	262.5844	0.01	0.28
TPVM, SR319 Pasture --> TPVM	106.5806	263.3659	0.01	0.28
Agricultural Land-Row Crops --> AGRR	45.5418	112.5362	0.00	0.12
Residential-Medium Density --> URMD	1.6604	4.1029	0.00	0.00
SR 319 Hayland - no litter --> TBHA	12.9668	32.0416	0.00	0.03

SOIL:

MANTACHIE	1841.9146	4551.4632	0.20	4.82
LANEVILLE	3332.6194	8235.0692	0.36	8.72
RENTZEL	0.7907	1.9538	0.00	0.00
ATTOYAC	13053.3524	32255.4863	1.40	34.16
DREKA	301.0031	743.7938	0.03	0.79
ALAZAN	424.3456	1048.5793	0.05	1.11
BERNALDO	2058.3965	5086.4007	0.22	5.39
AUSTONIO	58.2714	143.9916	0.01	0.15
KIRVIN	65.3083	161.3800	0.01	0.17
WATER	2760.2628	6820.7473	0.30	7.22
SAWTOWN	230.3975	569.3236	0.02	0.60
LILBERT	83.4143	206.1209	0.01	0.22
SACUL	71.7917	177.4008	0.01	0.19
TENAHA	387.0266	956.3621	0.04	1.01
EASTWOOD	6414.8377	15851.3848	0.69	16.79
CUTHBERT	2188.1434	5407.0116	0.23	5.73
MOLLVILLE	73.7683	182.2852	0.01	0.19
DARCO	268.3490	663.1038	0.03	0.70
BOWIE	16.6038	41.0288	0.00	0.04

Table 9-74

LATEX	288.5898	713.1199	0.03	0.76
METCALF	1680.4625	4152.5068	0.18	4.40
GRAPELAND	36.2912	89.6773	0.00	0.09
MABEN	1121.0726	2770.2265	0.12	2.93
METH	1019.9476	2520.3415	0.11	2.67
GALLIME	57.0064	140.8656	0.01	0.15
OWENTOWN	181.0605	447.4095	0.02	0.47
BETIS	149.0389	368.2825	0.02	0.39
BESNER	43.8024	108.2379	0.00	0.11
<hr/>				
Area [ha] Area [acres] %Wat.Area %Sub.Area				
SUBBASIN #	74	58.1859	143.7803	0.01
LANDUSE:	Water --> WATR	58.1859	143.7803	0.01 100.00
SOIL:	BERNALDO	58.1859	143.7803	0.01 100.00
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Area [ha] Area [acres] %Wat.Area %Sub.Area				
SUBBASIN #	75	611.3468	1510.6685	0.07
LANDUSE:	Range-Brush --> RNGB	1.6740	4.1367	0.00 0.27
	Pasture --> PAST	1.3552	3.3487	0.00 0.22
	Range-Grasses --> RNGE	0.4783	1.1819	0.00 0.08
	Water --> WATR	277.1747	684.9126	0.03 45.34
	Wetlands-Forested --> WETF	18.4145	45.5033	0.00 3.01
	Wetlands-Mixed --> WETL	101.8778	251.7453	0.01 16.66
	Forest-Evergreen --> FRSE	158.2375	391.0128	0.02 25.88
	Forest-Mixed --> FRST	25.9079	64.0197	0.00 4.24
	Residential-Low Density --> URLD	26.2268	64.8077	0.00 4.29
SOIL:	ATTOYAC	282.5954	698.3075	0.03 46.23
	BERNALDO	269.6016	666.1991	0.03 44.10
	SACUL	59.1497	146.1620	0.01 9.68
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Table 9-75

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	76	29083.6800	71867.2275	3.11		
LANDUSE:						
Residential-High Density --> URHD		16.6822	41.2225	0.00	0.06	
Range-Brush --> RNGB		1739.2951	4297.8851	0.19	5.98	
Pasture --> PAST		2710.0240	6696.6048	0.29	9.32	
Range-Grasses --> RNGE		46.2515	114.2899	0.00	0.16	
Water --> WATR		2828.6177	6989.6558	0.30	9.73	
Wetlands-Forested --> WETF		5347.6268	13214.2532	0.57	18.39	
Wetlands-Mixed --> WETL		466.3895	1152.4717	0.05	1.60	
Forest-Deciduous --> FRSD		112.4268	277.8123	0.01	0.39	
Forest-Evergreen --> FRSE		12900.4638	31877.6910	1.38	44.36	
Forest-Mixed --> FRST		1286.8997	3179.9935	0.14	4.42	
Residential-Low Density --> URLD		1531.6771	3784.8506	0.16	5.27	
Agricultural Land-Row Crops --> AGRR		17.5519	43.3715	0.00	0.06	
Residential-Medium Density --> URMD		79.7740	197.1256	0.01	0.27	
SOIL:						
RENTZEL		2861.5867	7071.1239	0.31	9.84	
BERNALDO		444.5682	1098.5503	0.05	1.53	
SACUL		2655.1547	6561.0199	0.28	9.13	
MOLLVILLE		8235.9366	20351.4112	0.88	28.32	
DARCO		6909.5848	17073.9295	0.74	23.76	
TONKAWA		7789.8662	19249.1490	0.83	26.78	
TRAWICK		186.9827	462.0437	0.02	0.64	
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SUBBASIN #	77	6924.9864	17111.9876	0.74		
LANDUSE:						
Residential-High Density --> URHD		1.9764	4.8838	0.00	0.03	
Range-Brush --> RNGB		177.2455	437.9825	0.02	2.56	
Pasture --> PAST		202.7809	501.0817	0.02	2.93	
Range-Grasses --> RNGE		1.0277	2.5396	0.00	0.01	
Water --> WATR		3236.7463	7998.1620	0.35	46.74	
Wetlands-Forested --> WETF		465.1706	1149.4598	0.05	6.72	
Wetlands-Mixed --> WETL		213.2954	527.0637	0.02	3.08	
Forest-Deciduous --> FRSD		32.4133	80.0949	0.00	0.47	
Forest-Evergreen --> FRSE		2067.9696	5110.0562	0.22	29.86	

Table 9-76

Forest-Mixed --> FRST	272.7462	673.9695	0.03	3.94
Residential-Low Density --> URLD	250.2150	618.2937	0.03	3.61
Residential-Medium Density --> URMD	3.3994	8.4002	0.00	0.05

SOIL:

ATTOYAC	2066.2303	5105.7584	0.22	29.84
BERNALDO	1990.2567	4918.0237	0.21	28.74
SACUL	1535.1263	3793.3738	0.16	22.17
CUTHBERT	246.0250	607.9400	0.03	3.55
TONKAWA	1087.3482	2686.8917	0.12	15.70

SUBBASIN #	78	Area [ha]	Area [acres]	%Wat.	Area [ha]	Area [acres]	%Sub.Area
		9215.0272	22770.7930	0.99	22770.7930	5.25	0.99

LANDUSE:

Residential-High Density --> URHD	3.4797	8.5984	0.00	0.04
Range-Brush --> RNGB	608.4672	1503.5528	0.07	6.60
Pasture --> PAST	786.0092	1942.2681	0.08	8.53
Range-Grasses --> RNGE	6.3267	15.6335	0.00	0.07
Water --> WATR	1408.7905	3481.1917	0.15	15.29
Wetlands-Forested --> WETF	1945.0546	4806.3271	0.21	21.11
Wetlands-Mixed --> WETL	237.9617	588.0154	0.03	2.58
Forest-Deciduous --> FRSD	109.2141	269.8735	0.01	1.19
Forest-Evergreen --> FRSE	3147.8330	7778.4527	0.34	34.16
Forest-Mixed --> FRST	553.2670	1367.1504	0.06	6.00
Residential-Low Density --> URLD	404.3531	999.1767	0.04	4.39
Residential-Medium Density --> URMD	4.2705	10.5526	0.00	0.05

SOIL:

MANTACHIE	17.5565	43.3830	0.00	0.19
ATTOYAC	1698.5518	4197.2065	0.18	18.43
BERNALDO	1786.9670	4415.6848	0.19	19.39
KULLIT	1132.4733	2798.3982	0.12	12.29
SACUL	2853.0103	7049.9311	0.30	30.96
CUTHBERT	1726.4682	4266.1893	0.18	18.74

SUBBASIN #	79	Area [ha]	Area [acres]	%Wat.	Area [ha]	Area [acres]	%Sub.Area
		4535.0184	11206.2572	0.48	4535.0184	11206.2572	0.48

Table 9-77

LANDUSE:

Range-Brush --> RNGB	185.3304	457.9607	0.02	4.09
Pasture --> PAST	199.7265	493.5343	0.02	4.40
Range-Grasses --> RNGE	7.0399	17.3959	0.00	0.16
Water --> WATR	1590.7724	3930.8782	0.17	35.08
Wetlands-Forested --> WETF	362.9090	896.7664	0.04	8.00
Wetlands-Mixed --> WETL	165.2391	408.3141	0.02	3.64
Forest-Deciduous --> FRSD	26.6566	65.8697	0.00	0.59
Forest-Evergreen --> FRSE	1569.5737	3878.4951	0.17	34.61
Forest-Mixed --> FRST	201.8622	498.8117	0.02	4.45
Residential-Low Density --> URLD	225.2757	556.6675	0.02	4.97
Residential-Medium Density --> URMD	0.6328	1.5637	0.00	0.01

SOIL:

BERNALDO	809.4264	2000.1331	0.09	17.85
KULLIT	519.0517	1282.6027	0.06	11.45
SACUL	2793.1657	6902.0521	0.30	61.59
DARCO	127.1131	314.1028	0.01	2.80
TONKAWA	286.2615	707.3665	0.03	6.31

SUBBASIN #

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
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80	16127.2064	39851.1334	1.72
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LANDUSE:

Range-Brush --> RNGB	1136.7870	2809.0575	0.12	7.05
Pasture --> PAST	1650.5318	4078.5466	0.18	10.23
Range-Grasses --> RNGE	7.1178	17.5884	0.00	0.04
Water --> WATR	1410.5839	3485.6233	0.15	8.75
Wetlands-Forested --> WETF	2828.5228	6989.4212	0.30	17.54
Wetlands-Mixed --> WETL	388.0766	958.9568	0.04	2.41
Forest-Deciduous --> FRSD	24.6749	60.9730	0.00	0.15
Forest-Evergreen --> FRSE	7182.1465	17747.4430	0.77	44.53
Forest-Mixed --> FRST	1085.0645	2681.2487	0.12	6.73
Residential-Low Density --> URLD	411.9607	1017.9755	0.04	2.55
Residential-Medium Density --> URMD	1.7399	4.2994	0.00	0.01

SOIL:

SACUL	1819.0648	4495.0001	0.19	11.28
DARCO	4831.7006	11939.3737	0.52	29.96
TONKAWA	6800.8712	16805.2928	0.73	42.17
TRAWICK	2675.5698	6611.4668	0.29	16.59

Table 9-78

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	81	19575.8256	48372.8438	2.09		
LANDUSE:						
Residential-High Density --> URHD		0.5535	1.3678	0.00	0.00	
Range-Brush --> RNGB		1792.0717	4428.2989	0.19	9.15	
SR319 - Poultry Headquarters --> TBHQ		52.7452	130.3360	0.01	0.27	
Pasture --> PAST		4380.1453	10823.5582	0.47	22.38	
Range-Grasses --> RNGE		10.8337	26.7707	0.00	0.06	
TPLH, SR319 Pastureland --> TPLH		178.9541	442.2046	0.02	0.91	
Water --> WATR		63.5789	157.1067	0.01	0.32	
Wetlands-Forested --> WETF		4499.9489	11119.5988	0.48	22.99	
SR319 Pasture, no litter --> TBPA		107.7837	266.3389	0.01	0.55	
Wetlands-Mixed --> WETL		14.2341	35.1731	0.00	0.07	
TPMH, SR319 Pasture --> TPMH		76.8641	189.9350	0.01	0.39	
TPMM, SR319 Pasture --> TPMM		44.0466	108.8413	0.00	0.23	
TPSS, SR319 Pasture --> TPSS		191.8439	474.0558	0.02	0.98	
TPMV, SR319 Pasture --> TPMV		49.5821	122.5198	0.01	0.25	
TPHH, SR319 Pasture --> TPHH		24.4352	60.3806	0.00	0.12	
Forest-Deciduous --> FRSD		484.0381	1196.0823	0.05	2.47	
Forest-Evergreen --> FRSE		5715.3819	14122.9945	0.61	29.20	
TPHM, SR319 Pasture --> TPHM		15.3412	37.9088	0.00	0.08	
Forest-Mixed --> FRST		994.5674	2457.6258	0.11	5.08	
Residential-Low Density --> URLD		870.0982	2150.0562	0.09	4.44	
Residential-Medium Density --> URMD		1.8188	4.4943	0.00	0.01	
SR 319 Hayland - no litter --> TBHA		6.9589	17.1958	0.00	0.04	
SOIL:						
MANTACHIE		2270.5744	5610.7027	0.24	11.60	
ATTTOYAC		1407.5932	3478.2332	0.15	7.19	
WATER		1751.5046	4328.0554	0.19	8.95	
CUTHBERT		13994.7186	34581.6493	1.50	71.49	
MOLLVILLE		151.4349	374.2032	0.02	0.77	
SUBBASIN #	82	10688.2520	26411.2051	1.14		
LANDUSE:						

Table 9-79

Range-Brush --> RNGB	630.4139	1557.7843	0.07	5.90
SR319 - Poultry Headquarters --> TBHQ	7.9869	19.7361	0.00	0.07
Pasture --> PAST	1846.2461	4562.1664	0.20	17.27
Range-Grasses --> RNGE	4.2702	10.5520	0.00	0.04
Water --> WATR	9.4894	23.4488	0.00	0.09
Wetlands-Forested --> WETF	2424.2309	5990.3959	0.26	22.68
Wetlands-Mixed --> WETL	8.9359	22.0810	0.00	0.08
TPMH, SR319 Pasture --> TPMH	21.4303	52.9553	0.00	0.20
TPSS, SR319 Pasture --> TPSS	55.5922	137.3711	0.01	0.52
TPMV, SR319 Pasture --> TPMV	4.3493	10.7474	0.00	0.04
TPHH, SR319 Pasture --> TPHH	23.2491	57.4496	0.00	0.22
Forest-Deciduous --> FRSD	44.3630	109.6233	0.00	0.42
Forest-Evergreen --> FRSE	4598.7319	11363.6965	0.49	43.03
TPHM, SR319 Pasture --> TPHM	3.3213	8.2071	0.00	0.03
Forest-Mixed --> FRST	540.7389	1336.1928	0.06	5.06
Residential-Low Density --> URLD	463.8746	1146.2572	0.05	4.34
Residential-Medium Density --> URMD	1.0280	2.5403	0.00	0.01

SOIL:

MANTACHIE	1020.5873	2521.9223	0.11	9.55
ATTOYAC	402.9050	995.5985	0.04	3.77
KULLIT	5261.3308	13001.0115	0.56	49.23
WATER	2796.7698	6910.9581	0.30	26.17
SACUL	906.7933	2240.7316	0.10	8.48
CUTHBERT	65.0816	160.8199	0.01	0.61
MOLLVILLE	234.7841	580.1633	0.03	2.20

SUBBASIN #	83	Area [ha]	Area [acres]	
			%Wat.	%Sub.Area
		1494.7283	3693.5484	0.16

LANDUSE:

Range-Brush --> RNGB	259.0694	640.1734	0.03	17.33
Pasture --> PAST	271.6394	671.2346	0.03	18.17
Range-Grasses --> RNGE	2.5298	6.2513	0.00	0.17
Water --> WATR	0.8696	2.1489	0.00	0.06
Wetlands-Forested --> WETF	503.1970	1243.4249	0.05	33.66
Wetlands-Mixed --> WETL	0.7906	1.9535	0.00	0.05
Forest-Deciduous --> FRSD	5.6130	13.8701	0.00	0.38
Forest-Evergreen --> FRSE	321.9196	795.4794	0.03	21.54
Forest-Mixed --> FRST	73.9972	182.8509	0.01	4.95
Residential-Low Density --> URLD	55.1026	136.1614	0.01	3.69

Table 9-80

SOIL:

MANTACHIE	397.1817	981.4559	0.04	26.57
ATTOYAC	230.2927	569.0647	0.02	15.41
BERNALDO	44.5881	110.1794	0.00	2.98
KULLIT	529.3648	1308.0869	0.06	35.42
SACUL	293.3010	724.7614	0.03	19.62

SUBBASIN #

84

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	5191.5068	12828.4729	0.55	

LANDUSE:

Range-Brush --> RNGB	632.1560	1562.0890	0.07	12.18
Pasture --> PAST	542.8872	1341.5013	0.06	10.46
Water --> WATR	0.8698	2.1492	0.00	0.02
Wetlands-Forested --> WETF	1477.5608	3651.1266	0.16	28.46
Wetlands-Mixed --> WETL	0.5535	1.3677	0.00	0.01
Forest-Deciduous --> FRSD	174.6632	431.6016	0.02	3.36
Forest-Evergreen --> FRSE	1848.4731	4567.6694	0.20	35.61
Forest-Mixed --> FRST	303.7037	750.4670	0.03	5.85
Residential-Low Density --> URLD	209.7698	518.3517	0.02	4.04
Residential-Medium Density --> URMD	0.8698	2.1492	0.00	0.02

SOIL:

MANTACHIE	359.6845	888.7984	0.04	6.93
ATTOYAC	770.9219	1904.9866	0.08	14.85
BERNALDO	11.5441	28.5260	0.00	0.22
CUTHBERT	4049.3563	10006.1620	0.43	78.00

SUBBASIN #

85

	Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	6892.7312	17032.2834	0.74	

LANDUSE:

Range-Brush --> RNGB	361.5685	893.4539	0.04	5.25
Pasture --> PAST	239.5698	591.9889	0.03	3.48
Range-Grasses --> RNGE	17.9480	44.3503	0.00	0.26
Water --> WATR	3869.3288	9561.3050	0.41	56.14
Wetlands-Forested --> WETF	346.1507	855.3556	0.04	5.02
Wetlands-Mixed --> WETL	169.2011	418.1044	0.02	2.45

Table 9-81

Forest-Deciduous --> FRSD	23.7988	58.8081	0.00	0.35
Forest-Evergreen --> FRSE	1499.8808	3706.2805	0.16	21.76
Forest-Mixed --> FRST	162.7968	402.2789	0.02	2.36
Residential-Low Density --> URLD	201.3809	497.6224	0.02	2.92
Residential-Medium Density --> URMD	1.1069	2.7353	0.00	0.02

SOIL:

BERNALDO	1243.1537	3071.8950	0.13	18.04
KULLIT	744.3267	1839.2686	0.08	10.80
SACUL	3356.1118	8293.1201	0.36	48.69
DARCO	983.6593	2430.6714	0.11	14.27
TONKAWA	74.3220	183.6533	0.01	1.08
TRAWICK	491.1576	1213.6750	0.05	7.13

SUBBASIN #	86	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		6923.0104	17107.1048	0.74	

LANDUSE:

Range-Brush --> RNGB	466.6976	1153.2331	0.05	6.74
Pasture --> PAST	198.5779	490.6959	0.02	2.87
Range-Grasses --> RNGE	8.8608	21.8956	0.00	0.13
Water --> WATR	2744.4096	6781.5734	0.29	39.64
Wetlands-Forested --> WETF	216.9325	536.0510	0.02	3.13
Wetlands-Mixed --> WETL	163.2927	403.5045	0.02	2.36
Forest-Deciduous --> FRSD	2.6899	6.6469	0.00	0.04
Forest-Evergreen --> FRSE	2654.4562	6559.2940	0.28	38.34
Forest-Mixed --> FRST	296.6010	732.9159	0.03	4.28
Residential-Low Density --> URLD	170.4922	421.2947	0.02	2.46

SOIL:

OSIER	48.4973	119.8393	0.01	0.70
SACUL	2834.9168	7005.2212	0.30	40.95
DARCO	290.2718	717.2762	0.03	4.19
TONKAWA	3749.3245	9264.7682	0.40	54.16

SUBBASIN #	87	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		25399.7072	62763.9465	2.72	

LANDUSE:

Table 9-82

Residential-High Density --> URHD	11.3080	27.9427	0.00	0.04
Range-Brush --> RNGB	1028.3971	2541.2206	0.11	4.05
SR319 - Poultry Headquarters --> TBHQ	0.9489	2.3448	0.00	0.00
Pasture --> PAST	1596.0912	3944.0212	0.17	6.28
Range-Grasses --> RNGE	17.4760	43.1841	0.00	0.07
Water --> WATR	2997.0993	7405.9823	0.32	11.80
Wetlands-Forested --> WETF	7602.2305	18785.4918	0.81	29.93
Wetlands-Mixed --> WETL	556.3861	1374.8580	0.06	2.19
TPSS, SR319 Pasture --> TPSS	50.7675	125.4490	0.01	0.20
Forest-Deciduous --> FRSD	130.3190	322.0247	0.01	0.51
Forest-Evergreen --> FRSE	8828.0039	21814.4391	0.94	34.76
TPHM, SR319 Pasture --> TPHM	2.6886	6.6437	0.00	0.01
Forest-Mixed --> FRST	1593.6398	3937.9637	0.17	6.27
Residential-Low Density --> URLD	964.8191	2384.1163	0.10	3.80
Residential-Medium Density --> URMD	19.5320	48.2646	0.00	0.08

SOIL:

MANTACHIE	1707.9062	4220.3215	0.18	6.72
BERNALDO	3523.1990	8706.0008	0.38	13.87
KULLIT	1745.3096	4312.7473	0.19	6.87
SACUL	18423.2925	45524.8768	1.97	72.53

SUBBASIN #

Area [ha] Area [acres] %Wat.Area %Sub.Area

88 400.8184 990.4423 0.04

LANDUSE:

Water --> WATR Area [ha] Area [acres] %Wat.Area %Sub.Area

400.8184 990.4423 0.04 100.00

SOIL:

BERNALDO	76.2856	188.5054	0.01	19.03
SACUL	324.5328	801.9369	0.03	80.97

SUBBASIN #

Area [ha] Area [acres] %Wat.Area %Sub.Area

89 15486.9248 38268.9655 1.66

LANDUSE:

Residential-High Density --> URHD Area [ha] Area [acres] %Wat.Area %Sub.Area
Range-Brush --> RNGB 1.0279 2.5400 0.00 0.01
SR319 - Poultry Headquarters --> TBHQ 568.1077 1403.8226 0.06 3.67
3.4790 8.5968 0.00 0.02

Table 9-83

Pasture --> PAST	614.2047	1517.7305	0.07	3.97
Range-Grasses --> RNGE	1.1070	2.7354	0.00	0.01
Water --> WATR	766.8861	1895.0139	0.08	4.95
Wetlands-Forested --> WETF	2728.5775	6742.4514	0.29	17.62
Wetlands-Mixed --> WETL	208.8992	516.2003	0.02	1.35
Forest-Deciduous --> FRSD	12.0184	29.6981	0.00	0.08
Forest-Evergreen --> FRSE	9255.3722	22870.4874	0.99	59.76
Forest-Mixed --> FRST	731.2262	1806.8965	0.08	4.72
Residential-Low Density --> URLD	514.8155	1272.1348	0.06	3.32
TPVM, SR319 Pasture --> TPVM	67.6827	167.2473	0.01	0.44
Residential-Medium Density --> URMD	8.7766	21.6874	0.00	0.06
SR 319 Hayland - no litter --> TBHA	4.7441	11.7229	0.00	0.03

SOIL:

MANTACHIE	1628.6545	4024.4868	0.17	10.52
BERNALDO	1152.8989	2848.8708	0.12	7.44
KIRVIN	45.9388	113.5172	0.00	0.30
SACUL	12659.4325	31282.0907	1.35	81.74

SUBBASIN #	90	Area [ha]	Area [acres] %Wat.Area %Sub.Area		
			4976.4347	0.22	

LANDUSE:

Range-Brush --> RNGB	82.3258	203.4312	0.01	4.09
Pasture --> PAST	27.6266	68.2668	0.00	1.37
Range-Grasses --> RNGE	0.3958	0.9780	0.00	0.02
Water --> WATR	683.2250	1688.2830	0.07	33.93
Wetlands-Forested --> WETF	108.0526	267.0034	0.01	5.37
Wetlands-Mixed --> WETL	150.0863	370.8707	0.02	7.45
Forest-Deciduous --> FRSD	0.3166	0.7824	0.00	0.02
Forest-Evergreen --> FRSE	659.9521	1630.7746	0.07	32.77
Forest-Mixed --> FRST	221.8047	548.0905	0.02	11.01
Residential-Low Density --> URLD	80.1093	197.9542	0.01	3.98

SOIL:

BERNALDO	833.0737	2058.5669	0.09	41.37
TEHRAN	10.0532	24.8421	0.00	0.50
KIRVIN	847.3224	2093.7761	0.09	42.07
SACUL	316.4794	782.0363	0.03	15.71
LETNEY	4.9870	12.3232	0.00	0.25
KISATCHIE	1.9790	4.8902	0.00	0.10

Table 9-84

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	91	4805.9464	11875.7339	0.51		
LANDUSE:						
Range-Brush --> RNGB		330.5610	816.8329	0.04	6.88	
Pasture --> PAST		101.2244	250.1306	0.01	2.11	
Range-Grasses --> RNGE		20.3240	50.2215	0.00	0.42	
Water --> WATR		2546.5854	6292.7398	0.27	52.99	
Wetlands-Forested --> WETF		93.6326	231.3708	0.01	1.95	
Wetlands-Mixed --> WETL		268.7192	664.0187	0.03	5.59	
Forest-Deciduous --> FRSD		15.3418	37.9104	0.00	0.32	
Forest-Evergreen --> FRSE		1228.6116	3035.9607	0.13	25.56	
Forest-Mixed --> FRST		125.0280	308.9504	0.01	2.60	
Residential-Low Density --> URLD		75.2857	186.0347	0.01	1.57	
Residential-Medium Density --> URMD		0.6327	1.5633	0.00	0.01	
SOIL:						
BERNALDO		1103.5045	2726.8148	0.12	22.96	
OSIER		1297.5707	3206.3622	0.14	27.00	
SACUL		1951.8918	4823.2223	0.21	40.61	
TONKAWA		452.9793	1119.3346	0.05	9.43	
SUBBASIN #	92	578.6963	1429.9875	0.06		
LANDUSE:						
Range-Brush --> RNGB		0.4743	1.1721	0.00	0.08	
Water --> WATR		564.8613	1395.8006	0.06	97.61	
Wetlands-Forested --> WETF		1.0277	2.5396	0.00	0.18	
Wetlands-Mixed --> WETL		8.8544	21.8796	0.00	1.53	
Forest-Evergreen --> FRSE		2.7670	6.8374	0.00	0.48	
Residential-Low Density --> URLD		0.7115	1.7582	0.00	0.12	
SOIL:						
BERNALDO		578.2220	1428.8154	0.06	99.92	
SACUL		0.4743	1.1721	0.00	0.08	

Table 9-85

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	93	10960.0496	27082.8306	1.17		
LANDUSE:						
Range-Brush --> RNGB		875.3968	2163.1492	0.09	7.99	
Pasture --> PAST		662.8919	1638.0390	0.07	6.05	
Range-Grasses --> RNGE		7.5895	18.7539	0.00	0.07	
Water --> WATR		4.4272	10.9398	0.00	0.04	
Wetlands-Forested --> WETF		2021.3261	4994.7979	0.22	18.44	
Wetlands-Mixed --> WETL		17.7878	43.9545	0.00	0.16	
Forest-Deciduous --> FRSD		16.3648	40.4382	0.00	0.15	
Forest-Evergreen --> FRSE		6276.4042	15509.3086	0.67	57.27	
Forest-Mixed --> FRST		615.6949	1521.4130	0.07	5.62	
Residential-Low Density --> URLD		460.0319	1136.7619	0.05	4.20	
Residential-Medium Density --> URMD		2.1345	5.2745	0.00	0.02	
SOIL:						
MANTACHIE		1208.4634	2986.1734	0.13	11.03	
BERNALDO		167.9959	415.1262	0.02	1.53	
WATER		1.3440	3.3210	0.00	0.01	
TEHRAN		2450.8421	6056.1534	0.26	22.36	
KIRVIN		1614.0251	3988.3368	0.17	14.73	
RAYBURN		1051.5355	2598.3967	0.11	9.59	
CORRIGAN		235.2733	581.3720	0.03	2.15	
SACUL		1193.2844	2948.6655	0.13	10.89	
LETNEY		1448.1638	3578.4852	0.15	13.21	
IUKA		562.5687	1390.1354	0.06	5.13	
BROWNDELL		6.4036	15.8236	0.00	0.06	
NIKFUL		151.1567	373.5159	0.02	1.38	
KISATCHIE		868.9931	2147.3255	0.09	7.93	
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SUBBASIN #	94	5832.0256	14411.2269	0.62		
LANDUSE:						
Range-Brush --> RNGB		565.8891	1398.3403	0.06	9.70	
Pasture --> PAST		282.1540	697.2166	0.03	4.84	
Range-Grasses --> RNGE		3.6366	8.9863	0.00	0.06	
Water --> WATR		8.3800	20.7075	0.00	0.14	
Wetlands-Forested --> WETF		712.2234	1759.9396	0.08	12.21	

Table 9-86

Wetlands-Mixed --> WETL	18.6574	46.1034	0.00	0.32
Forest-Deciduous --> FRSD	17.6297	43.5638	0.00	0.30
Forest-Evergreen --> FRSE	3447.1959	8518.1935	0.37	59.11
Forest-Mixed --> FRST	516.5576	1276.4397	0.06	8.86
Residential-Low Density --> URLD	259.7018	641.7362	0.03	4.45

SOIL:

MANTACHIE	41.9792	103.7327	0.00	0.72
MELHOMES	11.7004	28.9123	0.00	0.20
NEWCO	30.5950	75.6018	0.00	0.52
BERNALDO	34.7060	85.7602	0.00	0.60
WATER	2.7670	6.8374	0.00	0.05
TEHRAN	1405.8684	3473.9711	0.15	24.11
KIRVIN	1856.5716	4587.6813	0.20	31.83
RAYBURN	1244.8295	3076.0360	0.13	21.34
CORRIGAN	15.8904	39.2661	0.00	0.27
LETNEY	644.8669	1593.4984	0.07	11.06
IUKA	286.1068	706.9843	0.03	4.91
NIKFUL	78.7406	194.5721	0.01	1.35
KISATCHIE	177.4036	438.3732	0.02	3.04

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	95	4858.9936	12006.8161	0.52

LANDUSE:

Residential-High Density --> URHD	0.3955	0.9772	0.00	0.01
Range-Brush --> RNGB	156.8438	387.5688	0.02	3.23
Pasture --> PAST	49.8293	123.1308	0.01	1.03
Range-Grasses --> RNGE	13.3669	33.0303	0.00	0.28
Water --> WATR	2732.9417	6753.2355	0.29	56.25
Wetlands-Forested --> WETF	100.6869	248.8024	0.01	2.07
Wetlands-Mixed --> WETL	156.6065	386.9825	0.02	3.22
Forest-Deciduous --> FRSD	2.5310	6.2543	0.00	0.05
Forest-Evergreen --> FRSE	1123.2957	2775.7199	0.12	23.12
Forest-Mixed --> FRST	321.2015	793.7050	0.03	6.61
Residential-Low Density --> URLD	198.2891	489.9824	0.02	4.08
Residential-Medium Density --> URMD	3.0056	7.4269	0.00	0.06

SOIL:

BERNALDO	1805.0086	4460.2665	0.19	37.15
OSIER	25.4683	62.9335	0.00	0.52

Table 9-87

KIRVIN	1756.3657	4340.0674	0.19	36.15
SACUL	1056.1448	2609.7865	0.11	21.74
CUTHBERT	216.0062	533.7622	0.02	4.45

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	96	8905.2032	22005.2024	0.95	

LANDUSE:

Range-Brush --> RNGB	700.7601	1731.6133	0.07	7.87
Pasture --> PAST	683.6838	1689.4169	0.07	7.68
Range-Grasses --> RNGE	1.8974	4.6885	0.00	0.02
Water --> WATR	1169.4092	2889.6687	0.13	13.13
Wetlands-Forested --> WETF	1226.9626	3031.8861	0.13	13.78
Wetlands-Mixed --> WETL	147.5992	364.7250	0.02	1.66
Forest-Deciduous --> FRSD	133.2899	329.3660	0.01	1.50
Forest-Evergreen --> FRSE	3795.5995	9379.1161	0.41	42.62
Forest-Mixed --> FRST	718.2317	1774.7864	0.08	8.07
Residential-Low Density --> URLD	325.0028	803.0982	0.03	3.65
Residential-Medium Density --> URMD	2.7670	6.8374	0.00	0.03

SOIL:

TAHOULA	32.3343	79.8996	0.00	0.36
MANTACHIE	400.8183	990.4422	0.04	4.50
MELHOMES	31.1484	76.9693	0.00	0.35
KIRBYVILLE	16.3648	40.4382	0.00	0.18
BERNALDO	1197.0001	2957.8471	0.13	13.44
WATER	18.5784	45.9081	0.00	0.21
TEHRAN	1978.8726	4889.8930	0.21	22.22
KIRVIN	2085.9946	5154.5970	0.22	23.42
SACUL	1.9764	4.8838	0.00	0.02
RAYBURN	773.0181	1910.1664	0.08	8.68
CORRIGAN	168.4702	416.2983	0.02	1.89
LETNEY	1260.2456	3114.1299	0.13	14.15
BROWNDELL	103.8807	256.6945	0.01	1.17
KISATCHIE	836.5008	2067.0352	0.09	9.39

SUBBASIN #		Area [ha]	Area [acres]	%Wat.	Area %Sub.Area
	97	1504.7685	3718.3582	0.16	

Table 9-88

LANDUSE:

Range-Brush --> RNGB	29.2741	72.3378	0.00	1.95
Pasture --> PAST	6.0131	14.8586	0.00	0.40
Range-Grasses --> RNGE	9.9690	24.6340	0.00	0.66
Water --> WATR	1023.7236	2529.6723	0.11	68.03
Wetlands-Forested --> WETF	30.4609	75.2704	0.00	2.02
Wetlands-Mixed --> WETL	86.3191	213.2987	0.01	5.74
Forest-Evergreen --> FRSE	281.0315	694.4428	0.03	18.68
Forest-Mixed --> FRST	8.3866	20.7238	0.00	0.56
Residential-Low Density --> URLD	28.0873	69.4052	0.00	1.87
Residential-Medium Density --> URMD	1.5033	3.7146	0.00	0.10

SOIL:

BERNALDO	233.3226	576.5518	0.02	15.51
KIRVIN	117.5712	290.5242	0.01	7.81
SACUL	834.3913	2061.8227	0.09	55.45
CUTHBERT	315.7648	780.2707	0.03	20.98
DARCO	3.7186	9.1889	0.00	0.25

SUBBASIN

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	5481.7244	13545.6151	0.59	

LANDUSE:

Residential-High Density --> URHD	0.6325	1.5628	0.00	0.01
Range-Brush --> RNGB	726.1374	1794.3217	0.08	13.25
Pasture --> PAST	372.8322	921.2870	0.04	6.80
Range-Grasses --> RNGE	1.0277	2.5396	0.00	0.02
Water --> WATR	925.4397	2286.8079	0.10	16.88
Wetlands-Forested --> WETF	455.9210	1126.6035	0.05	8.32
Wetlands-Mixed --> WETL	157.4813	389.1441	0.02	2.87
Forest-Deciduous --> FRSD	5.2178	12.8933	0.00	0.10
Forest-Evergreen --> FRSE	2346.2498	5797.7006	0.25	42.80
Forest-Mixed --> FRST	217.1692	536.6360	0.02	3.96
Residential-Low Density --> URLD	272.0347	672.2113	0.03	4.96
Residential-Medium Density --> URMD	1.5811	3.9071	0.00	0.03

SOIL:

MELHOMES	244.7601	604.8144	0.03	4.47
BERNALDO	98.9001	244.3872	0.01	1.80
TEHRAN	2163.0751	5345.0666	0.23	39.46
WATER	523.1193	1292.6540	0.06	9.54

Table 9-89

KIRVIN	273.9321	676.8998	0.03	5.00
SACUL	328.2441	811.1077	0.04	5.99
RAYBURN	214.9556	531.1661	0.02	3.92
CORRIGAN	132.1831	326.6310	0.01	2.41
LETNEY	772.2275	1908.2128	0.08	14.09
BROWNDELL	93.2871	230.5171	0.01	1.70
REDCO	2.1345	5.2745	0.00	0.04
KISATCHIE	634.9057	1568.8838	0.07	11.58
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	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	99	4498.0196	11114.8313	0.48
LANDUSE:				
Residential-High Density --> URHD	10.9133	26.9673	0.00	0.24
Range-Brush --> RNGB	528.4252	1305.7650	0.06	11.75
Pasture --> PAST	857.0895	2117.9110	0.09	19.05
Water --> WATR	19.6914	48.6584	0.00	0.44
Wetlands-Forested --> WETF	529.8486	1309.2825	0.06	11.78
Wetlands-Mixed --> WETL	0.4745	1.1725	0.00	0.01
Forest-Deciduous --> FRSD	512.1343	1265.5095	0.05	11.39
Forest-Evergreen --> FRSE	897.1049	2216.7911	0.10	19.94
Forest-Mixed --> FRST	724.9437	1791.3720	0.08	16.12
Residential-Low Density --> URLD	396.6747	980.2031	0.04	8.82
Residential-Medium Density --> URMD	20.7195	51.1988	0.00	0.46
SOIL:				
Mantachie	1.0281	2.5404	0.00	0.02
Laneville	87.2273	215.5431	0.01	1.94
Nahatche	295.4499	730.0716	0.03	6.57
Dams	3.7168	9.1845	0.00	0.08
Rentzel	15.5001	38.3014	0.00	0.34
Marietta	29.7348	73.4762	0.00	0.66
Dreka	256.3044	633.3410	0.03	5.70
Wrightsville	2.4515	6.0579	0.00	0.05
Woodtell	411.6212	1017.1366	0.04	9.15
Bernaldo	180.8603	446.9148	0.02	4.02
Briley	69.4339	171.5746	0.01	1.54
Pits	1.6607	4.1037	0.00	0.04
Sawlit	127.4800	315.0095	0.01	2.83
Naconiche	109.9238	271.6273	0.01	2.44
Kirvin	390.0319	963.7883	0.04	8.67

Table 9-90

Water	26.4134	65.2687	0.00	0.59
Sacul	278.1310	687.2756	0.03	6.18
Lilbert	759.0280	1875.5960	0.08	16.87
Thage	7.5919	18.7599	0.00	0.17
Cart	26.7297	66.0504	0.00	0.59
Elrose	16.3700	40.4510	0.00	0.36
Cuthbert	240.9625	595.4304	0.03	5.36
Tenaha	273.7024	676.3323	0.03	6.08
Mattex	5.2194	12.8974	0.00	0.12
Darco	229.6538	567.4860	0.02	5.11
Latex	138.8678	343.1493	0.01	3.09
Bowie	319.8862	790.4549	0.03	7.11
Iuka	38.2756	94.5810	0.00	0.85
Maben	31.5537	77.9707	0.00	0.70
Meth	5.0612	12.5066	0.00	0.11
Gallime	4.8240	11.9203	0.00	0.11
Tonkawa	108.3422	267.7190	0.01	2.41
Miscellaneous	4.9822	12.3112	0.00	0.11

SUBBASIN #	100	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		4535.3348	11207.0391	0.48	

LANDUSE:

Range-Brush --> RNGB	385.8732	953.5120	0.04	8.51
SR319 - Poultry Headquarters --> TBHQ	20.3258	50.2260	0.00	0.45
Pasture --> PAST	1293.2565	3195.7015	0.14	28.52
TPLH, SR319 Pastureland --> TPLH	9.0161	22.2792	0.00	0.20
Water --> WATR	18.8231	46.5128	0.00	0.42
Wetlands-Forested --> WETF	260.2014	642.9708	0.03	5.74
SR319 Pasture, no litter --> TBPA	129.1517	319.1402	0.01	2.85
Wetlands-Mixed --> WETL	7.4343	18.3706	0.00	0.16
TPMH, SR319 Pasture --> TPMH	31.9518	78.9545	0.00	0.70
TPMM, SR319 Pasture --> TPMM	11.3888	28.1422	0.00	0.25
TPMV, SR319 Pasture --> TPMV	2.5308	6.2538	0.00	0.06
TPHH, SR319 Pasture --> TPHH	18.5067	45.7311	0.00	0.41
Forest-Deciduous --> FRSD	365.2311	902.5043	0.04	8.05
Forest-Evergreen --> FRSE	890.4584	2200.3671	0.10	19.63
TPHM, SR319 Pasture --> TPHM	21.1167	52.1803	0.00	0.47
Forest-Mixed --> FRST	839.4462	2074.3136	0.09	18.51
Residential-Low Density --> URLD	184.2764	455.3562	0.02	4.06
TPVH, SR319 Pasture --> TPVH	28.7882	71.1372	0.00	0.63

Table 9-91

Agricultural Land-Row Crops --> AGRR	3.4008	8.4036	0.00	0.07
Residential-Medium Density --> URMD	1.1863	2.9315	0.00	0.03
SR 319 Hayland - no litter --> TBHA	0.3164	0.7817	0.00	0.01
SR Grass Establishment --> TBAP	12.6542	31.2691	0.00	0.28

SOIL:

Mantachie	2.5308	6.2538	0.00	0.06
Nahatche	758.4595	1874.1914	0.08	16.72
Dams	5.7735	14.2665	0.00	0.13
Marietta	26.8110	66.2514	0.00	0.59
Wrightsville	59.0001	145.7922	0.01	1.30
Pits	1.2654	3.1269	0.00	0.03
Kullit	1031.9478	2549.9947	0.11	22.75
Water	16.5295	40.8453	0.00	0.36
Kirvin	288.9897	714.1080	0.03	6.37
Lilbert	61.7682	152.6323	0.01	1.36
Sacul	1002.1314	2476.3169	0.11	22.10
Thage	31.6354	78.1727	0.00	0.70
Cart	457.3693	1130.1824	0.05	10.08
Cuthbert	420.8304	1039.8928	0.04	9.28
Elrose	1.2654	3.1269	0.00	0.03
Bowie	326.3986	806.5472	0.03	7.20
Iuka	42.6287	105.3378	0.00	0.94

SUBBASIN #	101	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
		683.6839	1689.4171	0.07	

LANDUSE:

Range-Brush --> RNGB	60.2808	148.9568	0.01	8.82
Pasture --> PAST	26.1402	64.5936	0.00	3.82
Range-Grasses --> RNGE	0.1584	0.3915	0.00	0.02
Water --> WATR	8.2381	20.3568	0.00	1.20
Wetlands-Forested --> WETF	137.6715	340.1931	0.01	20.14
Forest-Deciduous --> FRSD	21.8627	54.0238	0.00	3.20
Forest-Evergreen --> FRSE	299.2652	739.4992	0.03	43.77
Forest-Mixed --> FRST	99.3326	245.4558	0.01	14.53
Residential-Low Density --> URLD	30.7345	75.9465	0.00	4.50

SOIL:

Mantachie	166.5841	411.6376	0.02	24.37
Wrightsville	66.6178	164.6159	0.01	9.74

Table 9-92

Kullit	111.2145	274.8165	0.01	16.27
Water	0.3169	0.7830	0.00	0.05
Sacul	212.2898	524.5786	0.02	31.05
Thage	4.8320	11.9400	0.00	0.71
Cart	81.6682	201.8062	0.01	11.95
Bowie	40.1608	99.2393	0.00	5.87
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SUBBASIN #	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
102	19521.6720	48239.0276	2.09	
LANDUSE:				
Residential-High Density --> URHD	3.7950	9.3776	0.00	0.02
Range-Brush --> RNGB	2731.4449	6749.5370	0.29	13.99
SR319 - Poultry Headquarters --> TBHQ	69.3377	171.3368	0.01	0.36
Pasture --> PAST	2366.8095	5848.5047	0.25	12.12
Range-Grasses --> RNGE	7.6690	18.9506	0.00	0.04
TPLH, SR319 Pastureland --> TPLH	22.2956	55.0935	0.00	0.11
Water --> WATR	256.4782	633.7703	0.03	1.31
Wetlands-Forested --> WETF	4818.1367	11905.8566	0.52	24.68
TPLM, SR319 Pasture --> TPLM	22.3746	55.2888	0.00	0.11
SR319 Pasture, no litter --> TBPA	101.2788	250.2650	0.01	0.52
Wetlands-Mixed --> WETL	143.1028	353.6142	0.02	0.73
TPMH, SR319 Pasture --> TPMH	35.3409	87.3290	0.00	0.18
TPMM, SR319 Pasture --> TPMM	43.7215	108.0379	0.00	0.22
TPSS, SR319 Pasture --> TPSS	31.2296	77.1699	0.00	0.16
TPMV, SR319 Pasture --> TPMV	14.8637	36.7290	0.00	0.08
Forest-Deciduous --> FRSD	930.0100	2298.1013	0.10	4.76
Forest-Evergreen --> FRSE	4130.8479	10207.5318	0.44	21.16
TPHM, SR319 Pasture --> TPHM	30.8343	76.1931	0.00	0.16
Forest-Mixed --> FRST	2867.1159	7084.7867	0.31	14.69
Residential-Low Density --> URLD	838.7721	2072.6478	0.09	4.30
TPVH, SR319 Pasture --> TPVH	16.9984	42.0039	0.00	0.09
TPVM, SR319 Pasture --> TPVM	12.4918	30.8680	0.00	0.06
Residential-Medium Density --> URMD	26.7231	66.0340	0.00	0.14
SOIL:				
Mantachie	107.3666	265.3083	0.01	0.55
LANEVILLE	269.8397	666.7874	0.03	1.38
Ruston	330.7967	817.4153	0.04	1.69
Estes	2692.2300	6652.6350	0.29	13.79
Nahatche	76.2161	188.3337	0.01	0.39

Table 9-93

RENTZEL	16.6821	41.2224	0.00	0.09
Marietta	25.6953	63.4943	0.00	0.13
DREKA	111.2407	274.8813	0.01	0.57
Wrightsville	1915.6799	4733.7409	0.20	9.81
ALAZAN	12.9662	32.0402	0.00	0.07
BONN	202.6367	500.7255	0.02	1.04
Keithville	1635.5622	4041.5559	0.17	8.38
Briley	72.7373	179.7376	0.01	0.37
Larue	172.0396	425.1185	0.02	0.88
Kullit	5.9297	14.6525	0.00	0.03
AUSTONIO	70.8398	175.0488	0.01	0.36
Cahaba	43.0099	106.2796	0.00	0.22
Guyton	999.2686	2469.2427	0.11	5.12
Water	330.9549	817.8060	0.04	1.70
Kirvin	291.3446	719.9272	0.03	1.49
SAWTOWN	46.1724	114.0943	0.00	0.24
LILBERT	207.5386	512.8382	0.02	1.06
SACUL	1181.0329	2918.3913	0.13	6.05
Latch	125.4719	310.0473	0.01	0.64
Thage	15.2590	37.7058	0.00	0.08
Cart	1521.3171	3759.2506	0.16	7.79
Beauregard	45.6190	112.7267	0.00	0.23
TENAHA	239.8751	592.7433	0.03	1.23
CUTHBERT	476.5876	1177.6719	0.05	2.44
Eastwood	1880.8135	4647.5841	0.20	9.63
Bowie	1713.5176	4234.1877	0.18	8.78
LATEX	216.3145	534.5239	0.02	1.11
Gallion	1.5812	3.9073	0.00	0.01
Iuka	22.3746	55.2888	0.00	0.11
Bienville	149.9812	370.6111	0.02	0.77
Metcalf	1515.7827	3745.5749	0.16	7.76
MABEN	330.7967	817.4153	0.04	1.69
Meth	356.4920	880.9095	0.04	1.83
GALLIME	3.3997	8.4008	0.00	0.02
OWENTOWN	52.8927	130.7005	0.01	0.27
BESNER	35.8152	88.5012	0.00	0.18

	Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
SUBBASIN #	103	1392.8240	3441.7377	0.15

LANDUSE:

Table 9-94

	Range-Brush --> RNGB	179.6197	443.8493	0.02	12.90
SR319 - Poultry Headquarters --> TBHQ		3.0055	7.4268	0.00	0.22
	Pasture --> PAST	215.2906	531.9938	0.02	15.46
	Water --> WATR	10.2030	25.2120	0.00	0.73
	Wetlands-Forested --> WETF	538.6219	1330.9616	0.06	38.67
SR319 Pasture, no litter --> TBPA		16.4513	40.6520	0.00	1.18
	Wetlands-Mixed --> WETL	0.8700	2.1499	0.00	0.06
	Forest-Deciduous --> FRSD	5.4574	13.4855	0.00	0.39
	Forest-Evergreen --> FRSE	274.6102	678.5754	0.03	19.72
	Forest-Mixed --> FRST	81.7819	202.0873	0.01	5.87
Residential-Low Density --> URLD		66.2007	163.5851	0.01	4.75
Residential-Medium Density --> URMD		0.7118	1.7590	0.00	0.05

SOIL:

LANEVILLE	228.6573	565.0235	0.02	16.42
DREKA	49.1166	121.3696	0.01	3.53
ALAZAN	23.9651	59.2190	0.00	1.72
AUSTONIO	29.6598	73.2908	0.00	2.13
WATER	1.5819	3.9088	0.00	0.11
SAWTOWN	30.6089	75.6361	0.00	2.20
TENAHA	21.4341	52.9648	0.00	1.54
EASTWOOD	181.8343	449.3217	0.02	13.06
MOLLVILLE	22.3833	55.3102	0.00	1.61
LATEX	70.0762	173.1618	0.01	5.03
METCALF	167.9140	414.9239	0.02	12.06
MABEN	276.6666	683.6569	0.03	19.86
METH	274.1356	677.4028	0.03	19.68
GALLIME	2.9264	7.2314	0.00	0.21
BESNER	11.8639	29.3163	0.00	0.85

SUBBASIN #		Area [ha]	Area [acres]	%Wat.Area	%Sub.Area
	104	523.5146	1293.6308	0.06	

LANDUSE:

Range-Brush --> RNGB	1.1859	2.9303	0.00	0.23
Pasture --> PAST	0.6325	1.5628	0.00	0.12
Range-Grasses --> RNGE	0.7906	1.9535	0.00	0.15
Water --> WATR	462.6408	1143.2086	0.05	88.37
Wetlands-Forested --> WETF	0.6325	1.5628	0.00	0.12
Wetlands-Mixed --> WETL	15.2580	37.7032	0.00	2.91
Forest-Evergreen --> FRSE	13.0444	32.2333	0.00	2.49

Table 9-95

Forest-Mixed --> FRST	7.1942	17.7772	0.00	1.37
Residential-Low Density --> URLD	22.1359	54.6990	0.00	4.23

SOIL:

ATTOYAC	29.9626	74.0390	0.00	5.72
BERNALDO	81.4286	201.2141	0.01	15.55
SACUL	412.1235	1018.3777	0.04	78.72

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	105	365.4008	902.9236		0.04	

LANDUSE:

Residential-High Density --> URHD	1.7393	4.2978	0.00	0.48
Range-Brush --> RNGB	0.9487	2.3442	0.00	0.26
Pasture --> PAST	1.9764	4.8838	0.00	0.54
Range-Grasses --> RNGE	1.4230	3.5164	0.00	0.39
Water --> WATR	338.6796	836.8942	0.04	92.69
Wetlands-Forested --> WETF	3.1623	7.8141	0.00	0.87
Wetlands-Mixed --> WETL	4.3481	10.7444	0.00	1.19
Forest-Mixed --> FRST	1.4230	3.5164	0.00	0.39
Residential-Low Density --> URLD	7.5104	18.5586	0.00	2.06
Residential-Medium Density --> URMD	4.1900	10.3537	0.00	1.15

SOIL:

RUSTON	1.5021	3.7117	0.00	0.41
DAMS	2.0555	5.0792	0.00	0.56
TEHRAN	3.3204	8.2048	0.00	0.91
WATER	58.8183	145.3430	0.01	16.10
SACUL	265.8682	656.9737	0.03	72.76
LETNEY	2.6879	6.6420	0.00	0.74
DARCO	10.8308	26.7634	0.00	2.96
STRINGTOWN	10.2774	25.3959	0.00	2.81
KISATCHIE	10.0402	24.8099	0.00	2.75

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #	106	6593.5804	16293.0668		0.70	

LANDUSE:

Table 9-96

Residential-High Density --> URHD	84.8372	209.6369	0.01	1.29
Range-Brush --> RNGB	957.4030	2365.7907	0.10	14.52
Pasture --> PAST	895.8901	2213.7892	0.10	13.59
Range-Grasses --> RNGE	77.1678	190.6856	0.01	1.17
Water --> WATR	1188.6693	2937.2613	0.13	18.03
Wetlands-Forested --> WETF	250.9536	620.1189	0.03	3.81
Wetlands-Mixed --> WETL	1.1069	2.7352	0.00	0.02
Forest-Deciduous --> FRSD	373.2678	922.3633	0.04	5.66
Forest-Evergreen --> FRSE	1384.6724	3421.5948	0.15	21.00
Forest-Mixed --> FRST	934.5531	2309.3274	0.10	14.17
Residential-Low Density --> URLD	352.3154	870.5891	0.04	5.34
Agricultural Land-Row Crops --> AGRR	25.5381	63.1060	0.00	0.39
Residential-Medium Density --> URMD	67.2056	166.0684	0.01	1.02

SOIL:

Laneville	47.6764	117.8109	0.01	0.72
Dams	11.1482	27.5478	0.00	0.17
Attoyac	7.1950	17.7791	0.00	0.11
Rentzel	58.7456	145.1633	0.01	0.89
Dreka	19.6082	48.4529	0.00	0.30
Woodtell	515.2692	1273.2561	0.06	7.81
Bernaldo	39.3746	97.2965	0.00	0.60
Briley	24.7475	61.1522	0.00	0.38
Pits	14.5480	35.9489	0.00	0.22
Sawlit	279.8915	691.6260	0.03	4.24
Kullit	42.6163	105.3069	0.00	0.65
Naconiche	165.6420	409.3097	0.02	2.51
Kirvin	371.7655	918.6512	0.04	5.64
Water	1156.1734	2856.9623	0.12	17.53
Lilbert	986.7363	2438.2746	0.11	14.97
Sacul	538.7517	1331.2823	0.06	8.17
Thage	3.7951	9.3780	0.00	0.06
Elrose	17.2363	42.5917	0.00	0.26
Cuthbert	323.5356	799.4727	0.03	4.91
Tenaha	809.4716	2000.2448	0.09	12.28
Latex	158.3680	391.3353	0.02	2.40
Bowie	370.5005	915.5252	0.04	5.62
Darco	396.2758	979.2173	0.04	6.01
Iuka	64.0430	158.2534	0.01	0.97
Maben	96.5389	238.5523	0.01	1.46
Meth	25.3009	62.5199	0.00	0.38
Betis	28.7007	70.9210	0.00	0.44
Iulus	19.9245	49.2344	0.00	0.30

Table 9-97

		Area [ha]	Area [acres]	%Wat.	Area	%Sub.Area
SUBBASIN #		107	29876.9344	73827.3987	3.19	
LANDUSE:						
	Range-Brush --> RNGB	2506.9723	6194.8540	0.27	8.39	
SR319 - Poultry Headquarters --> TBHQ		26.0097	64.2713	0.00	0.09	
	Pasture --> PAST	6619.2734	16356.5557	0.71	22.16	
	Range-Grasses --> RNGE	0.3953	0.9768	0.00	0.00	
	Water --> WATR	1475.5964	3646.2726	0.16	4.94	
	Wetlands-Forested --> WETF	1442.8669	3565.3963	0.15	4.83	
SR319	Pasture, no litter --> TBPA	286.5811	708.1563	0.03	0.96	
	Wetlands-Mixed --> WETL	3.4785	8.5956	0.00	0.01	
	TPMH, SR319 Pasture --> TPMH	13.9140	34.3822	0.00	0.05	
	TPSS, SR319 Pasture --> TPSS	62.9293	155.5014	0.01	0.21	
	TPHH, SR319 Pasture --> TPHH	147.2039	363.7482	0.02	0.49	
	Forest-Deciduous --> FRSD	3405.2955	8414.6555	0.36	11.40	
	Forest-Evergreen --> FRSE	5788.6229	14303.9767	0.62	19.37	
	Forest-Mixed --> FRST	6831.3830	16880.6890	0.73	22.87	
	Residential-Low Density --> URLD	1148.8544	2838.8767	0.12	3.85	
	TPVH, SR319 Pasture --> TPVH	5.1387	12.6980	0.00	0.02	
Agricultural	Land-Row Crops --> AGRR	33.1248	81.8531	0.00	0.11	
	Residential-Medium Density --> URMD	4.9015	12.1119	0.00	0.02	
SR 319	Hayland - no litter --> TBHA	74.3925	183.8276	0.01	0.25	
SOIL:						
	Mantachie	526.3606	1300.6634	0.06	1.76	
	Laneville	622.0985	1537.2365	0.07	2.08	
	Nahatche	1885.1110	4658.2036	0.20	6.31	
	Rentzel	5.7712	14.2608	0.00	0.02	
	Dams	4.6644	11.5259	0.00	0.02	
	Marietta	184.1234	454.9782	0.02	0.62	
	Dreka	155.7420	384.8463	0.02	0.52	
	Wrightsville	171.0791	422.7449	0.02	0.57	
	Woodtell	1385.4716	3423.5696	0.15	4.64	
	Briley	60.0832	148.4686	0.01	0.20	
	Pits	12.6491	31.2566	0.00	0.04	
	Sawlit	1670.7878	4128.6003	0.18	5.59	
	Kullit	1713.7157	4234.6773	0.18	5.74	
	Kirvin	910.0236	2248.7138	0.10	3.05	
	Water	1521.8447	3760.5544	0.16	5.09	

Table 9-98

Sacul	6393.0127	15797.4540	0.68	21.40
Lilbert	1005.0500	2483.5287	0.11	3.36
SAWTOWN	3.7947	9.3770	0.00	0.01
Thage	58.6602	144.9523	0.01	0.20
Cart	1985.1970	4905.5211	0.21	6.64
EASTWOOD	4.2691	10.5491	0.00	0.01
Elrose	73.1276	180.7020	0.01	0.24
Tenaha	447.1456	1104.9192	0.05	1.50
Cuthbert	2636.5465	6515.0384	0.28	8.82
Mattex	7.3523	18.1679	0.00	0.02
Latex	295.9889	731.4034	0.03	0.99
Darco	832.3898	2056.8767	0.09	2.79
Bowie	1358.4342	3356.7587	0.15	4.55
Woden	2.8460	7.0327	0.00	0.01
Iuka	668.2677	1651.3229	0.07	2.24
METCALF	10.6727	26.3727	0.00	0.04
Maben	2163.2331	5345.4571	0.23	7.24
Redsprings	205.5479	507.9190	0.02	0.69
Meth	409.7517	1012.5171	0.04	1.37
Owentown	11.5423	28.5216	0.00	0.04
Tonkawa	134.6338	332.6870	0.01	0.45
Betis	129.7323	320.5751	0.01	0.43
Iulus	210.2122	519.4449	0.02	0.70

Table 9-99

Appendix Table 10. Predicted mean annual phosphorous and nitrogen loading at the farm level where conservation practices were implemented, Toledo Bend Reservoir watershed, 1976 through 2005. The subbasins in this table are those that contained conservation practices implemented through the 319(h) or SB503 programs.

Subbasin	Phosphorous Loading (kg)		P reduction % I vs. II	Nitrogen Loading (kg)		N reduction % I vs. II
	Scenario I Current Conditions	Scenario II Treated Conditions		Scenario I Current Conditions	Scenario II Treated Conditions	
5	115	30	74%	52	30	42%
7	699	176	75%	279	111	60%
8	1,341	396	70%	524	201	62%
9	356	102	71%	116	63	46%
11	206	64	69%	87	61	30%
12	2,961	737	75%	1,139	368	68%
16	1,627	454	72%	623	200	68%
17	285	87	70%	93	49	47%
18	618	184	70%	235	82	65%
20	412	107	74%	163	58	65%
21	2,975	724	76%	1,154	353	69%
23	526	149	72%	193	85	56%
24	450	126	72%	171	75	56%
25	883	189	79%	350	109	69%
26	2,923	871	70%	1,075	371	66%
27	4,321	1,050	76%	1,668	509	69%
28	645	152	76%	234	74	68%
31	63	21	67%	24	17	30%
32	298	96	68%	109	51	53%
34	2,043	545	73%	747	234	69%
41	7,754	1,937	75%	2,863	816	71%
42	3,881	958	75%	1,450	417	71%
43	6,008	1,547	74%	2,313	706	69%
44	4,970	1,240	75%	1,854	534	71%
46	5,830	1,612	72%	2,261	730	68%
50	4,739	1,273	73%	1,798	553	69%
51	5,772	1,329	77%	2,126	566	73%

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Appendix Table 10 – cont.

Subbasin	Phosphorous Loading (kg)			Nitrogen Loading (kg)			
	Scenario I Current Conditions	Scenario II Treated Conditions	P reduction % I vs. II	Scenario I Current Conditions	Scenario II Treated Conditions	N reduction % I vs. II	
57	7,995	2,159	73%	3,108	957	69%	
58	7,349	2,339	68%	2,758	972	65%	
59	4,303	1,218	72%	1,596	517	68%	
60	1,902	316	83%	692	146	79%	
61	2,328	517	78%	902	258	71%	
73	6,490	1,618	75%	2,532	734	71%	
81	1,465	374	74%	617	189	69%	
82	824	192	77%	380	132	65%	
87	635	195	69%	244	84	66%	
89	361	59	84%	136	29	79%	
100	2,774	618	78%	1,106	319	71%	
102	4,447	1,111	75%	1,690	533	68%	
103	142	51	64%	57	27	52%	
107	2,204	673	69%	869	335	61%	

Table 10-2

Appendix Table 11. Predicted mean annual phosphorous and nitrogen loading at the subbasin level for each modeling scenario, Toledo Bend Reservoir watershed, 1976 through 2005. See Figures 35 and 36 for charts of part of this data.

Subbasin	Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
5	5,539	2.7	2.7	2.75%	2.2	2.2	0.96%
7	1,993	2.9	0.9	67.90%	1.9	1.2	36.23%
8	12,217	7.3	6.9	5.11%	5.2	5.1	2.21%
9	10,042	3.1	3.0	4.40%	2.5	2.5	1.54%
11	10,831	2.9	2.7	8.21%	2.5	2.4	2.51%
12	28,065	11.4	9.8	14.53%	6.6	6.1	7.92%
16	18,249	11.6	11.0	5.69%	7.9	7.7	3.09%
17	5,457	0.9	0.6	35.80%	2.0	1.9	4.29%
18	2,851	2.8	1.1	61.90%	1.7	1.1	36.06%
20	8,268	6.7	6.4	4.50%	4.4	4.3	3.16%
21	12,917	8.0	6.2	22.72%	4.8	4.2	13.18%
23	12,646	5.4	4.6	13.90%	3.7	3.5	6.55%
24	18,358	4.9	4.4	9.35%	3.8	3.6	3.90%
25	3,924	6.6	5.7	13.87%	4.4	4.0	7.11%
26	12,586	8.6	7.7	10.39%	4.9	4.6	6.01%
27	15,097	7.7	5.7	26.26%	4.6	3.9	14.92%
28	5,989	1.1	0.5	54.10%	0.9	0.7	20.73%
31	3,054	0.8	0.5	29.61%	1.3	1.2	4.48%
32	2,394	5.6	4.9	12.26%	4.2	4.0	5.77%
34	7,319	9.5	8.7	7.96%	6.4	6.2	3.66%
41	24,951	17.6	15.0	14.52%	9.6	8.7	9.02%
42	5,596	23.3	19.2	17.48%	11.4	10.1	11.70%
43	19,651	20.4	15.3	25.10%	10.1	8.3	17.43%
44	11,593	26.7	22.1	17.56%	13.3	11.7	11.74%
46	8,974	15.8	11.2	29.04%	8.9	7.2	18.41%
50	5,837	17.0	10.0	41.32%	8.6	6.2	28.77%
51	5,058	36.7	27.3	25.58%	16.7	13.8	17.36%

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Appendix Table 11 – cont.

Subbasin	Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
57	18,238	25.4	18.8	25.96%	13.4	11.1	16.77%
58	5,689	29.4	15.9	45.86%	14.5	9.7	33.45%
59	9,202	8.4	5.1	38.95%	5.2	4.1	22.14%
60	5,341	9.1	8.1	11.12%	6.3	6.0	5.13%
61	2,770	10.5	5.6	46.77%	5.4	3.6	33.68%
73	38,208	10.8	7.9	26.29%	6.2	5.2	16.79%
81	19,576	11.6	7.7	34.03%	7.2	5.7	21.57%
82	10,688	4.2	3.4	19.06%	2.8	2.5	11.46%
87	25,400	0.7	0.3	54.85%	0.6	0.5	24.11%
89	15,487	1.1	0.3	75.24%	0.7	0.5	38.97%
100	4,535	14.3	11.8	17.43%	7.7	6.9	11.03%
102	19,522	7.9	6.7	14.30%	5.0	4.6	7.21%
103	1,393	11.5	11.1	3.26%	7.3	7.1	1.97%
107	29,877	9.5	8.5	10.56%	6.1	5.7	5.71%

Table 11- 2

Appendix Table 12. Predicted mean annual sediment loading at the subbasin level for each modeling scenario, Toledo Bend Reservoir watershed, 1976 through 2005. See Figure 37 for a chart of part of this data.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
1	16,725	1,417	0.08	2.87	2.87	0.00%
2	9,041	964	0.11	2.72	2.72	0.00%
3	95	0	0.00	0.64	0.64	0.00%
4	6,210	1,243	0.20	4.06	4.06	0.00%
5	5,539	831	0.15	0.74	0.73	1.21%
6	8,601	1,166	0.14	1.85	1.85	0.00%
7	1,993	59	0.03	0.59	0.53	10.03%
8	12,217	2,985	0.24	2.45	2.35	3.88%
9	10,042	1,149	0.11	1.20	1.18	1.83%
10	10,646	1,325	0.12	1.37	1.37	0.00%
11	10,831	1,133	0.10	1.30	1.26	2.93%
12	28,065	10,897	0.39	3.24	2.98	7.88%
13	611	0	0.00	0.13	0.13	0.00%
14	1,419	0	0.00	0.18	0.18	0.00%
15	8,978	2,188	0.24	3.19	3.19	0.06%
16	18,249	6,562	0.36	6.68	6.64	0.70%
17	5,457	54	0.01	1.47	1.38	5.79%
18	2,851	49	0.02	0.45	0.39	12.36%
19	284	0	0.00	0.57	0.57	0.00%
20	8,268	1,757	0.21	1.55	1.51	2.71%
21	12,917	3,067	0.24	1.84	1.76	4.83%
22	2,160	191	0.09	3.03	3.03	0.00%
23	12,646	2,076	0.16	1.76	1.57	10.52%
24	18,358	2,890	0.16	2.77	2.67	3.60%
25	3,924	726	0.18	1.89	1.77	6.20%
26	12,586	1,718	0.14	3.40	3.19	6.18%
27	15,097	2,345	0.16	1.81	1.64	9.24%

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Appendix Table 12 – cont.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
28	5,989	56	0.01	0.32	0.29	7.59%
29	10,443	2,311	0.22	3.46	3.46	0.00%
30	12,136	3,192	0.26	4.88	4.88	0.00%
31	3,054	44	0.01	0.55	0.53	3.83%
32	2,394	419	0.18	2.66	2.58	3.12%
33	237	0	0.00	0.20	0.20	0.00%
34	7,319	1,111	0.15	4.56	4.31	5.67%
35	2,962	667	0.23	5.29	5.29	0.00%
36	20,453	6,074	0.30	5.51	5.51	0.00%
37	2,348	695	0.30	9.21	9.21	0.00%
38	243	25	0.10	2.31	2.31	0.00%
39	5,677	1,443	0.25	5.02	4.99	0.64%
40	12,561	1,735	0.14	4.63	4.63	0.00%
41	24,951	8,519	0.34	7.92	7.47	5.61%
42	5,596	2,026	0.36	10.15	8.90	12.34%
43	19,651	6,169	0.31	5.47	4.41	19.42%
44	11,593	4,035	0.35	8.30	7.05	15.09%
45	6,531	644	0.10	1.25	1.25	0.00%
46	8,974	1,606	0.18	8.44	7.71	8.64%
47	9,412	1,262	0.13	3.33	3.33	0.00%
48	3,533	338	0.10	1.26	1.26	0.00%
49	1,405	0	0.00	0.00	0.00	0.00%
50	5,837	1,254	0.21	5.81	4.99	14.08%
51	5,058	2,305	0.46	8.84	7.07	20.03%
52	225	33	0.15	1.46	1.46	0.00%
53	2,493	0	0.00	0.36	0.36	0.00%
54	5,328	792	0.15	3.62	3.62	0.00%
55	8,920	1,942	0.22	3.74	3.74	0.00%
56	8,689	2,391	0.28	5.80	5.80	0.00%

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Appendix Table 12 – cont.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
57	18,238	6,004	0.33	8.14	6.83	16.12%
58	5,689	1,764	0.31	15.37	12.92	15.89%
59	9,202	1,268	0.14	5.04	4.75	5.80%
60	5,341	791	0.15	7.31	7.07	3.32%
61	2,770	447	0.16	4.36	3.99	8.40%
62	5,962	632	0.11	4.01	3.91	2.59%
63	7,370	0	0.00	0.36	0.36	0.00%
64	47,418	6,942	0.15	3.17	3.17	0.00%
65	13,724	1,745	0.13	3.24	3.24	0.00%
66	14,135	1,262	0.09	2.36	2.36	0.00%
67	6,193	0	0.00	2.75	2.75	0.00%
68	2,548	0	0.00	0.13	0.13	0.00%
69	6,607	1,296	0.20	3.00	3.00	0.00%
70	5,155	847	0.16	0.29	0.29	0.00%
71	9,030	0	0.00	0.43	0.43	0.00%
72	8,512	0	0.00	0.88	0.88	0.00%
73	38,208	7,306	0.19	9.36	8.62	7.97%
74	58	0	0.00	0.00	0.00	0.00%
75	611	0	0.00	0.10	0.10	0.00%
76	29,084	3,313	0.11	1.72	1.72	0.00%
77	6,925	0	0.00	0.20	0.20	0.00%
78	9,215	994	0.11	3.36	3.36	0.00%
79	4,535	0	0.00	0.46	0.46	0.00%
80	16,127	1,873	0.12	0.63	0.63	0.00%
81	19,576	5,799	0.30	4.23	3.91	7.60%
82	10,688	2,325	0.22	1.23	1.20	3.00%
83	1,495	299	0.20	3.92	3.92	0.00%
84	5,192	626	0.12	16.85	16.85	0.00%

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Appendix Table 12 – cont.

Subbasin	Area (ha)	Pasture Hayland Area (ha)	Pasture Hayland Fraction	Sediment Loading (tonnes/ha)		Reduction (%) I vs. II
				Scenario I Current Condition	Scenario II Treated Condition	
85	6,893	0	0.00	0.19	0.19	0.00%
86	6,923	0	0.00	0.00	0.00	0.00%
87	25,400	70	0.00	0.15	0.14	7.89%
88	401	0	0.00	0.00	0.00	0.00%
89	15,487	93	0.01	0.16	0.14	14.47%
90	2,014	0	0.00	0.65	0.65	0.00%
91	4,806	0	0.00	0.04	0.04	0.00%
92	579	0	0.00	0.00	0.00	0.00%
93	10,960	0	0.00	4.69	4.69	0.00%
94	5,832	0	0.00	8.29	8.29	0.00%
95	4,859	0	0.00	0.28	0.28	0.00%
96	8,905	734	0.08	6.78	6.78	0.00%
97	1,505	0	0.00	0.35	0.35	0.00%
98	5,482	0	0.00	6.96	6.96	0.00%
99	4,498	867	0.19	2.88	2.88	0.00%
100	4,535	1,741	0.38	3.25	2.86	11.94%
101	684	0	0.00	0.73	0.73	0.00%
102	19,522	3,042	0.16	2.44	2.31	5.30%
103	1,393	263	0.19	4.51	4.33	3.86%
104	524	0	0.00	0.00	0.00	0.00%
105	365	0	0.00	0.00	0.00	0.00%
106	6,594	1,102	0.17	2.38	2.38	0.00%
107	29,877	8,359	0.28	4.72	4.54	3.83%

Table 12- 4

Appendix Table 13. Predicted mean annual phosphorous and nitrogen loading at the watershed level for each modeling scenario, Toledo Bend Reservoir watershed, 1976 through 2005. See Figure 38 for a chart of part of this data.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
1	16,725	101,960	101,960	0.00%	364,446	364,446	0.00%
2	9,041	46,690	46,690	0.00%	132,989	132,989	0.00%
3	95	3,521	3,521	0.00%	19,286	19,286	0.00%
4	6,210	188,760	188,760	0.00%	610,530	610,530	0.00%
5	5,539	222,800	222,300	0.22%	760,580	759,690	0.12%
6	8,601	58,060	58,060	0.00%	188,537	188,537	0.00%
7	1,993	282,700	278,600	1.45%	991,940	988,630	0.33%
8	12,217	226,000	218,000	3.54%	567,690	560,300	1.30%
9	10,042	44,790	42,990	4.02%	141,561	137,998	2.52%
10	10,646	52,880	52,880	0.00%	166,404	166,404	0.00%
11	10,831	51,480	48,240	6.29%	180,048	174,643	3.00%
12	28,065	320,500	276,500	13.73%	433,828	405,730	6.48%
13	611	506,800	494,200	2.49%	1,590,180	1,576,190	0.88%
14	1,419	806,700	752,800	6.68%	1,989,600	1,951,000	1.94%
15	8,978	67,060	67,000	0.09%	153,947	153,900	0.03%
16	18,249	227,600	216,030	5.08%	321,416	313,706	2.40%
17	5,457	12,443	10,425	16.22%	68,019	65,199	4.15%
18	2,851	853,600	791,200	7.31%	2,174,200	2,121,400	2.43%
19	284	855,800	793,000	7.34%	2,215,200	2,163,900	2.32%
20	8,268	93,450	90,370	3.30%	304,507	298,948	1.83%
21	12,917	135,870	115,610	14.91%	366,754	360,150	1.80%
22	2,160	945,700	880,000	6.95%	2,508,900	2,451,100	2.30%
23	12,646	174,560	164,840	5.57%	500,560	496,930	0.73%
24	18,358	110,520	102,320	7.42%	299,844	293,833	2.00%
25	3,924	196,070	170,980	12.80%	355,020	325,870	8.21%
26	12,586	114,220	103,040	9.79%	179,389	168,439	6.10%
27	15,097	397,800	339,700	14.61%	694,640	653,610	5.91%

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Appendix Table 13 – cont.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
28	5,989	1,067,500	980,800	8.12%	2,870,600	2,810,500	2.09%
29	10,443	63,570	63,570	0.00%	142,463	142,463	0.00%
30	12,136	95,950	95,950	0.00%	186,200	186,200	0.00%
31	3,054	302,100	283,800	6.06%	944,680	932,920	1.24%
32	2,394	1,451,700	1,309,200	9.82%	3,561,100	3,459,700	2.85%
33	237	1,713,900	1,556,000	9.21%	4,366,600	4,266,300	2.30%
34	7,319	76,550	70,820	7.49%	131,837	126,201	4.27%
35	2,962	177,680	177,680	0.00%	394,960	394,960	0.00%
36	20,453	182,460	182,460	0.00%	296,074	296,074	0.00%
37	2,348	1,927,900	1,753,000	9.07%	4,690,200	4,605,700	1.80%
38	243	356,600	356,600	0.00%	699,320	699,320	0.00%
39	5,677	2,269,700	2,096,500	7.63%	5,293,000	5,218,100	1.42%
40	12,561	63,740	63,740	0.00%	180,508	180,508	0.00%
41	24,951	455,700	398,800	12.49%	588,265	556,612	5.38%
42	5,596	149,340	120,980	18.99%	232,220	181,077	22.02%
43	19,651	852,900	721,100	15.45%	1,095,110	997,450	8.92%
44	11,593	1,082,500	823,800	23.90%	1,156,500	1,023,410	11.51%
45	6,531	2,302,700	2,132,800	7.38%	5,367,100	5,306,300	1.13%
46	8,974	1,971,800	1,571,800	20.29%	2,392,110	2,150,130	10.12%
47	9,412	43,530	43,530	0.00%	112,383	112,383	0.00%
48	3,533	4,237,800	3,674,200	13.30%	7,675,100	7,376,700	3.89%
49	1,405	4,197,100	3,645,800	13.14%	7,485,300	7,209,300	3.69%
50	5,837	104,510	66,170	36.69%	141,054	125,148	11.28%
51	5,058	204,240	157,450	22.91%	283,380	252,850	10.77%
52	225	628,200	447,600	28.75%	670,470	579,010	13.64%
53	2,493	4,242,900	3,658,000	13.79%	7,400,800	7,117,300	3.83%
54	5,328	25,250	25,250	0.00%	59,250	59,250	0.00%
55	8,920	53,960	53,960	0.00%	89,649	89,649	0.00%
56	8,689	69,040	69,040	0.00%	101,277	101,277	0.00%

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Appendix Table 13 – cont.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
57	18,238	463,900	345,900	25.44%	444,954	373,501	16.06%
58	5,689	171,690	99,800	41.87%	184,189	155,876	15.37%
59	9,202	109,940	82,120	25.30%	290,091	275,818	4.92%
60	5,341	72,230	67,510	6.53%	199,278	198,360	0.46%
61	2,770	200,830	158,070	21.29%	533,935	513,850	3.76%
62	5,962	4,250,200	3,659,000	13.91%	7,252,300	6,969,700	3.90%
63	7,370	4,397,500	3,769,400	14.28%	7,540,900	7,248,400	3.88%
64	47,418	196,560	196,560	0.00%	370,154	370,154	0.00%
65	13,724	168,480	168,480	0.00%	296,004	296,004	0.00%
66	14,135	43,690	43,690	0.00%	141,088	141,088	0.00%
67	6,193	9,861	9,861	0.00%	60,986	60,986	0.00%
68	2,548	4,567,100	3,942,900	13.67%	7,784,900	7,500,500	3.65%
69	6,607	35,960	35,960	0.00%	91,131	91,131	0.00%
70	5,155	11,977	11,977	0.00%	60,071	60,071	0.00%
71	9,030	4,532,700	3,916,100	13.60%	7,702,400	7,429,700	3.54%
72	8,512	218,790	218,790	0.00%	546,920	546,920	0.00%
73	38,208	337,300	258,500	23.36%	400,308	356,704	10.89%
74	58	4,730,900	4,116,500	12.99%	8,147,100	7,885,200	3.21%
75	611	5,038,200	4,348,900	13.68%	8,416,100	8,120,500	3.51%
76	29,084	92,310	92,310	0.00%	291,135	291,135	0.00%
77	6,925	5,055,500	4,372,600	13.51%	8,375,700	8,102,800	3.26%
78	9,215	277,790	218,460	21.36%	491,050	452,400	7.87%
79	4,535	5,294,300	4,555,700	13.95%	8,714,600	8,425,000	3.32%
80	16,127	22,190	22,190	0.00%	101,851	101,851	0.00%
81	19,576	202,620	135,710	33.02%	210,622	166,517	20.94%
82	10,688	41,510	33,780	18.62%	88,588	84,057	5.11%
83	1,495	244,620	172,150	29.63%	318,053	265,517	16.52%
84	5,192	29,900	29,900	0.00%	75,174	75,174	0.00%

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Appendix Table 13 – cont.

Subbasin	Subbasin Area (ha)	Phosphorous Loading (kg)			Nitrogen Loading (kg)		
		Scenario I Current Condition	Scenario II Treated Condition	P reduction % I vs. II	Scenario I Current Condition	Scenario II Treated Condition	N reduction % I vs. II
85	6,893	5,285,800	4,553,100	13.86%	8,729,200	8,447,300	3.23%
86	6,923	48	48	0.00%	12,903	12,903	0.00%
87	25,400	16,071	9,019	43.88%	81,336	78,608	3.35%
88	401	5,257,700	4,528,500	13.87%	8,590,600	8,323,000	3.12%
89	15,487	17,129	6,450	62.34%	59,225	54,347	8.24%
90	2,014	15,624	15,624	0.00%	128,571	128,571	0.00%
91	4,806	5,257,600	4,523,300	13.97%	8,603,400	8,337,400	3.09%
92	579	30,270	20,558	32.08%	181,230	177,097	2.28%
93	10,960	9,804	9,804	0.00%	82,313	82,313	0.00%
94	5,832	5,550	5,550	0.00%	40,542	40,542	0.00%
95	4,859	5,271,500	4,530,100	14.06%	8,707,900	8,445,900	3.01%
96	8,905	20,108	20,108	0.00%	75,150	75,150	0.00%
97	1,505	5,270,100	4,530,900	14.03%	8,667,200	8,412,800	2.94%
98	5,482	3,446	3,446	0.00%	31,880	31,880	0.00%
99	4,498	128,580	124,720	3.00%	328,152	324,901	0.99%
100	4,535	163,710	141,400	13.63%	247,585	222,971	9.94%
101	684	103,470	101,650	1.76%	348,221	344,348	1.11%
102	19,522	1,913,000	1,734,800	9.32%	4,642,900	4,549,300	2.02%
103	1,393	633,600	449,800	29.01%	655,620	561,980	14.28%
104	524	5,082,200	4,397,800	13.47%	8,491,400	8,209,600	3.32%
105	365	5,253,170	4,516,360	14.03%	8,585,200	8,336,900	2.89%
106	6,594	316,200	305,100	3.51%	548,260	540,040	1.50%
107	29,877	286,900	256,700	10.53%	345,144	319,790	7.35%

Table 13- 4

Appendix Table 14. Predicted mean annual sediment loading at the watershed level for each modeling scenario, Toledo Bend Reservoir watershed, 1976 through 2005. See Figure 38 for a chart of part of this data.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)		
		Scenario I Current Condition	Scenario II Treated Condition	Sed. reduction % I vs. II
1	16,725	46,210	46,210	0.00%
2	9,041	24,520	24,520	0.00%
3	95	5,045,000	5,045,000	0.00%
4	6,210	174,000	174,000	0.00%
5	5,539	5,294,000	5,294,000	0.00%
6	8,601	15,420	15,420	0.00%
7	1,993	7,393,000	7,393,000	0.00%
8	12,217	239,600	238,500	0.46%
9	10,042	11,560	11,350	1.82%
10	10,646	14,390	14,390	0.00%
11	10,831	12,950	12,570	2.93%
12	28,065	64,110	59,070	7.86%
13	611	9,659,000	9,658,000	0.01%
14	1,419	11,560,000	11,550,000	0.09%
15	8,978	25,550	25,530	0.08%
16	18,249	118,000	117,200	0.68%
17	5,457	8,012	7,549	5.78%
18	2,851	13,180,000	13,180,000	0.00%
19	284	14,570,000	14,570,000	0.00%
20	8,268	12,790	12,440	2.74%
21	12,917	20,760	19,770	4.77%
22	2,160	7,640,000	7,636,000	0.05%
23	12,646	167,800	165,700	1.25%
24	18,358	42,340	40,870	3.47%
25	3,924	207,100	204,700	1.16%
26	12,586	36,090	33,870	6.15%
27	15,097	174,300	171,600	1.55%

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Appendix Table 14 – cont.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)		
		Scenario I Current Condition	Scenario II Treated Condition	Sed. reduction % I vs. II
28	5,989	5,875,000	5,872,000	0.05%
29	10,443	33,430	33,430	0.00%
30	12,136	55,620	55,620	0.00%
31	3,054	343,600	340,200	0.99%
32	2,394	8,999,000	8,992,000	0.08%
33	237	12,070,000	12,050,000	0.17%
34	7,319	33,360	31,480	5.64%
35	2,962	137,000	137,000	0.00%
36	20,453	103,500	103,500	0.00%
37	2,348	8,163,000	8,156,000	0.09%
38	243	190,600	190,600	0.00%
39	5,677	8,750,000	8,744,000	0.07%
40	12,561	57,380	57,380	0.00%
41	24,951	186,200	175,700	5.64%
42	5,596	56,790	49,780	12.34%
43	19,651	163,100	156,000	4.35%
44	11,593	400,800	373,400	6.84%
45	6,531	12,120,000	12,120,000	0.00%
46	8,974	529,200	510,600	3.51%
47	9,412	31,300	31,300	0.00%
48	3,533	12,190,000	12,170,000	0.16%
49	1,405	15,530,000	15,520,000	0.06%
50	5,837	33,910	29,140	14.07%
51	5,058	44,700	35,750	20.02%
52	225	231,200	215,700	6.70%
53	2,493	18,390,000	18,360,000	0.16%
54	5,328	19,310	19,310	0.00%
55	8,920	33,330	33,330	0.00%
56	8,689	50,350	50,350	0.00%

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Appendix Table 14 – cont.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)		
		Scenario I Current Condition	Scenario II Treated Condition	Sed. reduction % I vs. II
57	18,238	142,700	119,600	16.19%
58	5,689	87,410	73,520	15.89%
59	9,202	46,350	43,660	5.80%
60	5,341	39,040	37,740	3.33%
61	2,770	115,700	112,400	2.85%
62	5,962	20,860,000	20,830,000	0.14%
63	7,370	23,140,000	23,110,000	0.13%
64	47,418	108,900	108,900	0.00%
65	13,724	181,300	181,300	0.00%
66	14,135	31,830	31,830	0.00%
67	6,193	17,010	17,010	0.00%
68	2,548	15,640,000	15,630,000	0.06%
69	6,607	19,820	19,820	0.00%
70	5,155	1,493	1,493	0.00%
71	9,030	15,310,000	15,300,000	0.07%
72	8,512	159,300	159,300	0.00%
73	38,208	268,700	247,600	7.85%
74	58	15,700,000	15,690,000	0.06%
75	611	16,200,000	16,180,000	0.12%
76	29,084	79,880	79,880	0.00%
77	6,925	23,510,000	23,480,000	0.13%
78	9,215	143,200	142,700	0.35%
79	4,535	26,660,000	26,620,000	0.15%
80	16,127	7,851	7,851	0.00%
81	19,576	72,900	67,400	7.54%
82	10,688	12,470	12,100	2.97%
83	1,495	140,600	137,300	2.35%
84	5,192	87,490	87,490	0.00%

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Appendix Table 14 – cont.

Subbasin	Subbasin Area (ha)	Sediment Loading (tonnes)		
		Scenario I Current Condition	Scenario II Treated Condition	Sed. reduction % I vs. II
85	6,893	19,440,000	19,420,000	0.10%
	6,923	16	16	0.00%
	25,400	3,136	2,876	8.29%
	401	23,260,000	23,240,000	0.09%
89	15,487	2,358	2,015	14.55%
	2,014	57,040	57,040	0.00%
	4,806	20,120,000	20,110,000	0.05%
	579	76,840	76,590	0.33%
93	10,960	51,380	51,380	0.00%
	5,832	48,340	48,340	0.00%
	4,859	20,280,000	20,260,000	0.10%
	8,905	49,660	49,660	0.00%
97	1,505	24,350,000	24,320,000	0.12%
	5,482	38,140	38,140	0.00%
	4,498	126,200	126,200	0.00%
	4,535	125,700	123,600	1.67%
101	684	76,310	76,110	0.26%
	19,522	7,665,000	7,657,000	0.10%
	1,393	204,900	187,100	8.69%
	524	20,190,000	20,170,000	0.10%
105	365	34,190,000	34,150,000	0.12%
	6,594	219,900	219,200	0.32%
	29,877	125,000	120,200	3.84%

Table 14- 4

Appendix Table 15. Manure production and application by subbasin, scenario I and II, Toledo Bend Reservoir watershed.

Subbasin	Area (ha)	Manure Prod. (tonnes)	Manure Application (tonnes)		Manure Application (tonnes)	
			Scenario I On Farm	Scenario I Off Farm	Scenario II On Farm	Scenario II Off Farm
5	5,539	0	219	(219)	109	(109.12)
7	1,993	299	442	(143)	31	268.79
8	12,217	684	334	350	123	561.00
9	10,042	0	406	(406)	199	(198.72)
11	10,831	0	438	(438)	215	(214.69)
12	28,065	2,072	1,583	489	1,354	717.53
16	18,249	0	950	(950)	83	(82.89)
17	5,457	0	220	(220)	108	(108.23)
18	2,851	596	422	174	316	279.73
20	8,268	936	119	817	159	776.86
21	12,917	1,481	1,788	(308)	717	763.45
23	12,646	1,003	145	859	48	955.06
24	18,358	647	133	514	29	618.00
25	3,924	800	577	223	78	722.07
26	12,586	4,116	713	3,403	472	3,643.48
27	15,097	3,479	2,287	1,192	946	2,533.41
28	5,989	1,037	268	769	96	941.14
31	3,054	0	123	(123)	60	(60.33)
32	2,394	0	108	(108)	48	(47.91)
34	7,319	2,716	527	2,189	384	2,332.22
41	24,951	10,999	4,755	6,244	1,554	9,444.64
42	5,596	4,393	2,396	1,997	966	3,427.74
43	19,651	14,667	9,125	5,542	2,649	12,017.60
44	11,593	13,044	4,040	9,003	1,305	11,738.92
45	6,531	459	0	459	0	459.04
46	8,974	5,006	2,950	2,056	1,194	3,812.33
50	5,837	3,339	2,809	530	594	2,745.40

(continued on next page)

Appendix Table 15 – cont.

Subbasin	Area (ha)	Manure Prod. (tonnes)	Manure Application (tonnes)		Manure Application (tonnes)	
			Scenario I On Farm	Scenario I Off Farm	Scenario II On Farm	Scenario II Off Farm
51	5,058	6,753	3,148	3,605	753	5,999.79
57	18,238	18,427	9,247	9,180	3,054	15,372.78
58	5,689	4,859	4,596	263	1,364	3,494.86
59	9,202	557	1,641	(1,084)	278	278.55
60	5,341	1,246	334	912	358	888.34
61	2,770	770	959	(189)	143	626.95
73	38,208	11,646	8,643	3,002	2,491	9,154.67
81	19,576	3,254	5,535	(2,281)	3,486	(232.32)
82	10,688	1,354	1,125	229	972	382.23
87	25,400	0	694	(694)	461	(461.15)
89	15,487	414	615	(202)	83	330.78
100	4,535	1,897	983	913	188	1,709.40
102	19,522	5,238	1,994	3,244	583	4,654.60
103	1,393	673	56	617	28	645.63
107	29,877	2,279	2,102	177	670	1,608.45

*Only the subbasins with concentrated animal feeding operations (CAFO), or utilizing manure from a CAFO are listed in this table.

**In some subbasins, more manure is applied than produced, as indicated by the negative values in parentheses. This indicates a transfer of manure into the subbasin.